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VOL. XL. No. 159.

JULY, 1931.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROF. G. E. MOORE.

WITH THE CO-OPERATION OF F. C. BARTLETT, M.A., AND C. D. BROAD, LITT.D.

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PUBLISHED FOR THE MIND ASSOCIATION BY
MACMILLAN & CO., LIMITED,
ST. MARTIN'S STREET, LONDON, W.C. 2.

NEW YORK: THE MACMILLAN COMPANY.

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Yearly Subscribers will receive MIND *post free* from the Publishers on payment (in advance) of Sixteen Shillings.

Entered as Second Class Matter, March 15, 1929, at the Post Office at Boston, Mass., under the Act of March 3, 1879 (Sec. 397, P. L. & R.).

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—PROFESSOR STOUT'S THEORY OF POSSIBILITIES, TRUTH, AND ERROR.

BY R. F. ALFRED HOERNLÉ.

THE theory of alternative possibilities belonging to the real constitution of the universe, which Prof. Stout has expounded in his essay on "Real Being and Being for Thought",¹ and the explanation of truth and error which he bases on that theory, are by common consent among his most important contributions to the theory of knowledge. But the way in which the theory is stated in that essay seems to me at certain points to raise difficulties which, if I am right, can be avoided or removed by qualifications or emendations. It is the purpose of this brief paper to point out these difficulties and to suggest the required qualifications and amendments, in the hope that Prof. Stout will either endorse them, or give us his own improved statement, or even point out that my difficulties proceed from a misunderstanding of his real meaning.

1. I will begin with a small point. More than once Prof. Stout lays down the principle that "we cannot think of an alternative at all without thinking of its being fulfilled. A possibility and its fulfilment are so related that the thought of the first involves the thought of the second."² Construed literally, this might be taken to mean that an unfulfilled alternative is unthinkable and is in fact a contradiction in terms.

¹ See *Studies in Philosophy and Psychology*, ch. xv.

² *Loc. cit.*, p. 339, *et passim*.

Yet there are occasions on which we have to think of an alternative as unfulfilled, *e.g.*, whenever the whole point of our thought is to contrast a fulfilled with an unfulfilled alternative. Thus, Prof. Stout himself says that reality is "capable of alternative determinations; and one of these is fixed on by the mind in the act of judging as an alternative which is fulfilled, or, in the case of negative judgments, *which is not fulfilled*".¹ This is to say that in the judgment, "A is not B", the possibility of A being B is thought of and believed to be a non-fulfilled possibility. So, again, in a disjunctive judgment of the form, "A is either B or C", the alternatives, B and C, can hardly be thought of as both realised at once, so long as they are being thought of in the relation to each other which is expressed by "or".

A slight emendation of the language of the statement would remove the difficulty. Would Prof. Stout agree to say that a possibility is thought of automatically as a fulfilled possibility whenever, and so long as, nothing in the context of the whole thought forbids our so doing or compels us to think of it as unfulfilled?

2. My next difficulty arises in connection with the argument in the context of which Prof. Stout uses the principle just considered. There is a "vital difference" we are told, between "merely considering" an alternative and "believing" in it.² The difference, Prof. Stout holds, does not lie in the object presented to consciousness in these two cases, but is a difference in the mental acts in relation to the *same* object.³ What he intends to deny is that the difference is one between thinking of a possibility simply as such (without any reference in thought to its being fulfilled or unfulfilled), and believing it to be fulfilled. This is the point of his doctrine that thinking of a possibility and thinking of it as a fulfilled possibility always go together.

This doctrine of the difference between the mental acts of considering and believing—a doctrine which must extend also to other acts such as supposing, doubting, etc.—coupled with the sameness of the object of these acts, has important consequences for the theory of truth and error. But postponing consideration of truth and error for the moment, I wish to clear up a difficulty of terminology in the names of these various acts, lest there be a purely verbal misunderstanding.

¹ *Loc. cit.*, p. 338. Italics mine.

² *Ibid.*

³ *Loc. cit.*, p. 343. Italics mine.

I take my clue from the difference between "only thinking" and "believing" in such a passage as this: "Error, or the risk of error, first arises when the mind not only thinks of a possibility being fulfilled, but also *believes* in its being fulfilled".¹ How, in the light of this contrast, are we to interpret the opening sentences of the essay? "Whenever we think of anything we think of its having a being which does not merely consist in its being thought of. The being thus mentally referred to may be either asserted or merely supposed. . . ." ² Is the "mental referring" of this passage identical with "supposing" or is it a different act? The language suggests that it is a different sort of act—an act which is basal for both asserting and supposing, and from which we may go on to either of these further acts. This is borne out, too, by the words which follow: "if it is asserted, the assertion may be either true or false; if it is merely supposed, the supposition may or may not be fictitious".³ Mental referring, I therefore take it, is a mode of entertaining the object which, as such, does not involve the alternatives of the object so referred to being true or false, fictitious or non-fictitious. But, again, how are these two, "mental referring" and "supposing," related to "considering" and "only-thinking"? Assuming these latter two to be synonyms, is either of the former two terms intended to be synonymous with them? There are passages in which considering and only-thinking are apparently identified with supposing or "mere supposing", e.g., "it will not do to say that in *mere supposition* we *only think* of an alternative, whereas in belief we think of it as fulfilled".⁴ Again, "the interrogative attitude . . . agrees with that of mere supposal, inasmuch as an alternative is contemplated merely as such".⁵ Perhaps we should distinguish between "supposing" something which may be either fictitious or not, and "mere supposing" which is a synonym of considering and only-thinking, and which raises the question of the fictitious character of the object as little as it raises the question of its truth? At any rate, the "mere supposing" which is one with only-thinking and considering, and which contemplates the object "merely as such", before going on in an act of judging to assert or deny it, is, I suggest, to be distinguished from the "supposing" which constitutes the play of fancy or develops the "fictitious narrative" of imaginative literature.⁶

¹ *Loc. cit.*, p. 343. Stout's italics.

² *Loc. cit.*, p. 335.

³ *Ibid.* ⁴ *Loc. cit.*, p. 338. Italics mine.

⁵ *Loc. cit.*, p. 334.

⁶ *Cf. loc. cit.*, p. 345.

My point is that, whilst the "supposing" which creates or enjoys imaginative works of art may be called a "pure" or "mere" supposing in contrast with judging, it must, because of the acknowledged fictitious character of its objects, be distinguished from the "mere supposing", or "considering", which underlies both judging and imaginative supposing, and does not involve any question concerning the status of its objects.

If I am right in this, then the uncertainties in the usage of these terms can be easily removed by keeping strictly to the terminological scheme which is suggested by the opening sentences of the essay, quoted above, and which, I believe, is the usage really intended by Prof. Stout. This terminological scheme is as follows : Fundamental is the act of mental reference to an object as such, without any further evaluation of it as true or false, fictitious or otherwise. This act may also be expressed by such verbs as only-thinking, merely considering, contemplating, entertaining, etc. It is present whenever we understand the words of a sentence expressing a proposition without going on either to assert, respectively deny, it ; or to accept it as a fiction. This act is the basis of a variety of further acts such as judging, with its two alternatives of asserting and denying ; doubting ; supposing as a deliberate fiction ; supposing as a hypothesis looking to ultimate assertion ; supposing "for argument's sake", etc. In short, the distinction, so formulated, corresponds to what older writers might have expressed by contrasting "having an idea of an object" with various possible attitudes towards that "idea".

3. So far I have been using verbs for the mental acts. What of the corresponding nouns—mental reference, judgment, assertion, denial, belief, disbelief, supposition ? Some of these stand unambiguously for acts, *e.g.*, mental reference, denial, disbelief. Others, and especially judgment, assertion, belief, supposition, are commonly used ambiguously either for the acts or for the objects of these acts, *i.e.*, for what is judged, asserted, believed, supposed, etc. Now, it is surely only when taken as referring to the objects of these acts that these nouns can be qualified by adjectives like true, false, fictitious, etc. What is judged may be true or false, but the act of judging cannot be so characterised. To say that an act of judging is true, could only mean that it is a true, *i.e.*, a genuine, act of judging and not something else, *e.g.*, an act of supposing. Again, I may suppose what is fictitious, but my act of supposing is not itself a fictitious act. Perhaps more decisive still is the reminder that what is judged may be either positive or negative, and that, whichever

it is, it may be either asserted or denied, either believed or disbelieved.

True and false, then, apply to judgment and belief, not in the sense of the acts of judging and believing, but of the objects judged and believed. On the other hand, it is not until the object has become an object of an act of judging or believing that the question of its truth or falsity arises. The act is necessary in order to bring the object into the realm of things which are true or false.

I venture to labour this point, which, I think, is Prof. Stout's point, because it does not come out as clearly in Prof. Stout's own statement as might be wished. Above, I have already in another connection quoted the passage about error not arising until the mind passes from "only-thinking" of a possibility as being fulfilled to "believing" in its being fulfilled. Obviously the same principle applies to truth. But the text continues: "This does not involve any new object of thought; it only involves a new mental act in relation to the same object". To put the doctrine as sharply as possible, I will express it in two propositions, *viz.* :

(a) The same object may be either merely considered in thought or also believed.

(b) Not until the object is believed does it become relevant to ask, Is it really so? In other words, Is it true or false?

The justification for using the words "judgment" or "belief" for both the act and the object, and for speaking of a "judgment" or a "belief" as true or false without distinguishing between the act and the object, is that the question of truth and falsity does not arise until the object has become an object of just that sort of act. The act, if I may so put it, confers on the object a new status, or invests it with a new claim. I might also say that it relates the object, as it had not been related before, *viz.*, to some "intended" reality. "Truth does not consist in the mere agreement or correspondence of what is thought with what really is, and error does not consist in the mere disagreement or non-correspondence of what is thought with what really is. To constitute truth or error, the agreement or disagreement must be an agreement or disagreement not with any reality, but with some reality which the mind means or intends to describe or characterise in the act of judgment."¹ Judging or believing, then, add to the object as merely entertained in thought the reference to an intended reality, *i.e.*, to a reality to which the object judged is intended to be true.

¹ *Loc. cit.*, p. 337.

To sum up, the truth or falsity of a judgment does not depend on the act as such but on the relation of what is judged to a reality intended—on its agreement or disagreement with that intended reality. The act of judging does not make the object which hitherto had been merely entertained ("only thought") true or false, but it invests it with the claim to be true or false, to agree or disagree with the reality intended.

I have put this in my own words rather than in Prof. Stout's in order to enable him to judge more certainly whether I have correctly understood him or not. Anyhow, I take him to hold that what justifies our applying the terms "true" and "false" to judgments or beliefs is that these nouns stand for *the complex of act and object*, and that it is only as object of that sort of act that the object stands to an intended reality in the relation of agreement or disagreement.

4. However, granted that this is a point gained, it still is not a point, I think, which can stand without some further elucidation. This will appear when we turn to consider more in detail the relation of agreement to an intended reality.

First, we must bear in mind the limits within which Prof. Stout's argument is meant to apply. "We are here concerned only with erroneous judgments, and with such true judgments as are not beyond the reach of possible doubt. For these it seems to hold generally, that if we consider only what is directly asserted . . . this is, both in the case of truth and error, the fulfilment of a possible alternative, and not the fulfilled alternative itself."¹ It is obvious from this passage, and indeed from the whole context from which this passage has been quoted, that Prof. Stout's theory is devised to meet the problem of truth and error for those judgments in which the act of judging or believing is based on a prior act of only-thinking of the object, in distinction from being based on having present to consciousness the fulfilled possibility itself. The situation to be analysed is the situation in which we judge that something is so-and-so without having the something "itself" present to consciousness. The difference between having an object itself present to consciousness and believing in this object on the basis of only-thinking of it, is illustrated by Stout in a later passage as follows: "There is a difference between thinking of a sound being heard and actually hearing a sound, or between thinking of a toothache as about to be continued and being directly aware through experience of its continuation".² I do not feel sure how far Prof. Stout would have us press the language of these illustrations. They happen

¹ *Loc. cit.*, p. 339.

² *Loc. cit.*, p. 343.

to be taken from the field of sense-data the actual existence or fulfilment of which may plausibly be identified with their being actually or directly sensed by some mind. But it is not clear to me whether Prof. Stout wishes us to generalise this situation and say universally that a fulfilled possibility is always an actually experienced possibility, and that "actual existence" means being an object of actual or direct experience. A definite statement by Prof. Stout on this point is greatly to be desired in order to remove the possible ambiguity. Pending such a statement, I venture tentatively to suggest that the principle laid down in the opening sentence of his essay, and quoted above, might be reformulated to apply here by saying: "Whenever we experience anything we experience it as having a being which does not consist merely in its being experienced". Would Prof. Stout accept this? If so, direct experience would function as evidence of actual existence but would not necessarily constitute actual existence. It would serve to verify the actual fulfilment of a possibility, but would not constitute that fulfilment itself. To apply this to Prof. Stout's centaur example: "When I believe or disbelieve or suppose that a centaur actually exists, I must think of its actually existing".¹ I propose to interpret this as meaning that actual seeing of a centaur would be evidence of its actually existing, but that its actually existing would not consist merely in being seen. In general, then, if I am right in interpreting the "fulfilment" of a possibility and its "actual existence" as synonymous terms—and this is how Prof. Stout appears to me to be using these terms—then belief in the fulfilment of a possibility requires to be tested or verified by actual experience of its fulfilment, but such fulfilment will not consist merely in being experienced. And, similarly, when my belief turns out to be false and the possibility believed in must be ranked as unfulfilled, such non-fulfilment will be evidenced by its not being experienced where, if it were fulfilled, it should be experienced; but its non-fulfilment once more will not consist merely in its not being experienced. And, fulfilled or non-fulfilled, it will still be a possibility in the constitution of the universe, and as such capable of becoming the object of a mental reference.

5. What all this comes to is that some further explanation of just what is meant by the "fulfilment" or "actualisation" of a possibility is urgently required if Prof. Stout's theory is to become perfectly clear. And I will re-enforce the need for such further explanation by another line of argument.

¹ *Loc. cit.*, p. 335.

"When we believe in a possibility being fulfilled, our belief is false when the alternative asserted is other than any fulfilled alternative."¹ In other words, for the judgment, "A is B", to be false, A must actually be something other than B, say C. C will then be the fulfilled alternative, and B which had been judged to be the fulfilled alternative must now be judged to be an unfulfilled alternative. It seems to follow that fulfilment and non-fulfilment are alternatives for any "possible" object of thought, and if, in accordance with the argument of the preceding section, the difference between these alternatives is not merely the difference between being actually experienced and not being actually experienced, just what is the difference?

It is noticeable that Prof. Stout consistently avoids speaking of "unfulfilled" possibilities, no doubt under the influence of the principle discussed in section 1, above, that thinking of a possibility carries with it thinking of it as fulfilled. And, consistently with his treatment of the "not" in negative judgments as meaning "other than"², he interprets the falsity of the belief that "A is B" as consisting in B's being other than fulfilled C. But does this really dodge the necessity of admitting that B in this event is unfulfilled? Consider the disjunctive judgment, "A is either B or C". Here B is not C, in the sense of being other than C, and C is not B, in the sense of being other than B. But when "A is B" is false because "A is actually C", the falsity of the former does not consist in the mere difference, or otherness, of B and C as possibilities, but in the difference between C being realised or fulfilled and B not being fulfilled, *i.e.*, being *other than fulfilled B*. No doubt, the fulfilment of C is the ground for the non-fulfilment of B, where B and C are not merely different but also mutually exclusive, but still the non-fulfilment of B is part of the total situation. Hence, if this analysis is correct, we need an account of what the difference between being fulfilled and being unfulfilled consists in, if it does not consist merely in the difference between being experienced and not being experienced.

6. And now at last we are in a position to come to grips with truth as agreement and falsity as disagreement with reality. When a judgment is false, the object as it really is is other than the object as it is thought to be. This conflict is not inappropriately described as a "disagreement". But the "agreement" in the

¹ *Loc. cit.*, p. 343. For completeness, as well as for future use, I add at once the corresponding statement for a true belief: "The belief is true when the alternative asserted is *coincident* with the fulfilled alternative". (*Italics mine.*)

² *Loc. cit.*, pp. 345-346.

case of a true judgment turns out on closer inspection to be something very much like identity. In a true belief the asserted alternative is "coincident" with the fulfilled alternative.¹ And most explicitly: "My position is that what is before the mind in a possibly erroneous judgment is a possible alternative, and that what is required to make the judgment true is the *identity* of this with the actualised alternative".² "Coincidence" and "identity" are stronger words than "agreement". The latter invites us to distinguish two things which agree in some respect. The former suggest that there are *not two* objects which agree, but *only one* object in two contexts, *viz.*, the object as it actually exists which is identical with the object as it is judged to be. Let us recall that Prof. Stout holds (1) that to think of a possibility is to think of it as fulfilled; (2) that in thinking of a fulfilled possibility and in judging it to be fulfilled the object is the same and only the acts differ. When, now, we add (3) that in a true judgment the object judged is identical with the object actually existing, it would seem that there is here complete identity of object throughout.

Yet this will not do, for, if so, how could the judgment be "possibly erroneous"? Some difference, therefore, there must be; but the distinction, in the last quoted passage, between a "possible alternative" and an "actualised alternative" hardly yields the desired clue. "Possible", in contrast to "actualised", suggests "capable of being actualised". But this does not help for we are not judging merely that "A may be B", but that "A is B".

The problem comes to this: We are not dealing here with judgments which are necessarily true because the object judged is actually "itself" present to consciousness just as we judge it to be. We are dealing with judgments the objects of which are not present to consciousness in this direct way though in judging we intend the objects as they are in themselves. Hence (a) there must be a difference such that the question of truth and error can be legitimately raised; and (b) the difference must be such as to be compatible with the identity required for the judgment to be true, or with the special failure of identity which makes the judgment false.

There is one more suggestion with which Prof. Stout experiments in his efforts to clear up this problem without having recourse to the theory which his whole essay is devoted to rejecting, *viz.*, the theory that in judgment, and especially in false judgment, the mind has before it an object which is not real itself but merely

¹ *Loc. cit.*, p. 343.

² *Loc. cit.*, p. 348. Italics mine.

represents the real object.¹ This suggestion, expressed in my words, is that the act of judgment is similar when made on the basis of only-thinking of an alternative as fulfilled, and when made on the basis of an actual experience of the fulfilled alternative. At any rate, this is, I think, what Prof. Stout means when, with reference to the identity between possible and actualised alternative which is required for a judgment to be true, he says: "This is so because judging involves believing, and because the mental attitude in believing, so far as it differs from disbelieving or merely supposing, is in relevant respects similar, whether what is before the mind is only a possible alternative or actual existence".² An earlier passage had expressed the same point in slightly different language as follows: "The mental attitude of believing in a possibility being fulfilled . . . is . . . similar to what it would be if we did not merely think of an alternative being fulfilled, but of the fulfilled alternative itself".³ Yet the long account given by Prof. Stout of this similarity⁴, for all its carefully described psychological detail, does not, for me at any rate, throw any light on the problem which it is offered as explaining, *viz.*, "Why does belief in a possible alternative's being fulfilled . . . involve the antithesis of truth and error?"

Having so far attempted to make a positive suggestion for the removal of every one of the difficulties which I have pointed out, I shall venture to do so here also. I agree with Prof. Stout that the act of judgment must be concerned with what really is. It is something real which we intend to characterise in judging, and we intend to characterise it as it really is. Granted this, I propose to go on by saying that the object and its character may be either directly presented, as *e.g.*, in perception, or that they may be indirectly referred to by means of symbols with the help of which we "consider", or "only-think" of, it. In both cases the mental attitude of judging is "similar". In both cases, we intend the same object, *viz.*, the real object. In both cases we affirm in principle that the object is really what we perceive or think it to be. But there is the difference between perceiving the object "itself" and thinking of it by means of symbols. The object perceived is the fulfilment of the meaning of the symbols. The term "fulfilment" seems to have its proper significance in

¹ "The act of judging either rightly or wrongly must be ultimately concerned with what really is: what really is must be rightly or wrongly characterised, and for this to be possible what really is must itself be directly present to thinking consciousness and not something which merely represents it or stands for it." *Loc. cit.*, p. 337.

² *Loc. cit.*, p. 348.

³ *Loc. cit.*, p. 343.

⁴ *Loc. cit.*, p. 344.

this context of what Husserl calls "Bedeutungserfüllung". The judgments which are possibly erroneous are judgments in which we do, indeed, intend the object "itself" but have it present in mind only as the meaning of a set of symbols. And this meaning may or may not be completely fulfilled by the object itself. If it is fulfilled, we have the coincidence or identity which constitutes truth. In proportion as it is not fulfilled, because the real object is other than by means of our symbols we had thought it to be, the judgment is false. But the character falsely ascribed to the object has none the less its place in the universe somewhere, and is in that sense a "possibility". In a false judgment such a character is misplaced, so to speak; but even after the mistake has been discovered and corrected, the character, as a possibility, continues to belong to the constitution of the universe.

Would Prof. Stout agree to a restatement of his view on some such lines as these? At any rate, I hope I have made out a *prima facie* case for further elucidation, and some restatement, of his view; and if Prof. Stout does consent to give us such a restatement, I hope he will incidentally take the opportunity of dealing with the act of denying or disbelieving a negative judgment. It gives me great trouble to express this satisfactorily either in the terms of his theory or of any other.

7. I will conclude with a brief observation on a point which has nothing directly to do with Prof. Stout's theory, but which is suggested by my analysis of it. A judgment, we had found, is a complex of object and act such that the object only qualifies for consideration as true or false after it has become the object of just this sort of act.¹ This affords a convenient explanation for the familiar fact that in social intercourse our judgments of agreement with, or denial of, another person's judgments are always double-edged, and may be taken, according to the emphasis of the moment, as directed either upon the *judgment* as true or false, or upon the *speaker* as having made a true or false judgment. If we think another's assertion true, we can say either, "That is true", or "You are right". If we think it false, we say either, "That is false", or "You are wrong". And we say the latter because of the former: we tend to praise for true, and blame for false, judgments. The latter, we tend to think, ought not to have been made: the act of judging ought not to have taken place. In purely objective or impersonal criticism of another's judgments there will be no such sting of blame, and we shall avoid it, too, when we are convinced that the other is judging

¹ See section 3, above.

to the best of his ability. But, on the other hand, there is the fact that we often judge stupidly or thoughtlessly or recklessly, when, had we taken more thought or exercised a greater sense of intellectual responsibility, we should have judged differently or refrained from judging altogether. Descartes may or may not be right in holding that every act of judgment is an act of will, but at any rate it is an act which we can withhold or suspend until we have the right to judge. The practice of judgment is an art, and one is sometimes tempted to reckon it the finest and most difficult of all arts. Moreover, it is an art the exercise of which requires not only skill and training, but also the practice of those virtues which Aristotle rightly named the "intellectual virtues". The conduct of the intellect is not the least important part of conduct, and if our moral concepts were more enlightened and reflected more truly the things which really matter in human affairs, we should be far more keenly alive than we are to offences against the intellectual virtues, and much harder on the immorality of loose and slipshod thinking, above all on the part of those in power, on the quality of whose thinking so largely depends the weal and woe of nations.

II.—THE WORK OF ART AND THE ÆSTHETIC OBJECT.

BY P. LEON.

If we regard mathematical symbols and spoken or written words as the material through which mathematical, scientific or philosophic meaning is expressed, and pigments, stone, sounds, written or spoken words, and bodily movements as the material conveying æsthetic meaning, we have one of the most obvious distinctions between the two kinds of meaning, conceptual (mathematical, scientific or philosophic) on the one hand and æsthetic on the other. Conceptual meaning is not bound to the instruments which express it; while they may vary it remains the same. We may use Arabic ciphers or Roman numerals, geometric figures or algebraic symbols to apprehend and communicate the same mathematical truth, and the language of a philosophic or scientific treatise may be in Greek, German or English and convey the same meaning or information. Or, if we attend not to the language or symbols but to that which is apprehended through them by the mind—to the arguments, the proof, the examples given (the falling apple or the rising aeroplane as illustrations of gravitation), the order of exposition—we may say that these, too, may vary and yet be about, communicate, or illustrate the same truth; or we may have accounts of different aspects of the same object. Æsthetic meaning on the other hand is bound to or embodied in the material, or the work of art. These particular words in this particular language are the poem, these particular sounds in this order are the music, these movements the dance, this stone the statue or building. The poem, music, dance, building or statue is also the æsthetic meaning. Further, they are not *about*¹ anything, not being statements or judgments, any more than an exclamation is. Therefore they cannot be *about* the same object.

Because of this closeness of connection between æsthetic meaning and the material work of art, the question of æsthetic embodiment, of how stone or pigments or sound come to take

¹ I have argued this in *MIND*, N.S., XXX., 119 and 120, and XXXIII., 129, pp. 58 ff.

on expressiveness, has been, perhaps unprofitably, the chief if not the sole problem of *Æsthetics*, in strong contrast with *Logic* which, in studying the nature of conceptual thought, perhaps justifiably and profitably neglects as irrelevant the problem of its expression. So close is the connection that some will say not merely that the æsthetic object or that of which we are aware in the æsthetic experience is identical with the work of art, but also that the work of art is discovered in the rough material and that this is what is meant by creation. "In Michelangelo's unfinished statues of slaves in the Academy at Florence we can feel the artist not so much making the figure as chipping off flakes of the marble from the figure which is concealed in it, and which he is laying bare. . . . Shakespeare discovered *Hamlet* in the English language as the sculptor discovers his figure in the block."¹ The artist's work, then, difficult and meritorious as it is, can be fitly compared to the no less difficult and meritorious task of the mother who cleans her child who has been wallowing in the delights of mud.

But when we have reached this extreme limit of emphasis we cannot but pause and wonder whether there is any more truth in it than in the statement that Einstein's theory of relativity lay concealed and was discovered in the letters of the alphabet and in the numerals that went to the making of the mathematical formulæ. We begin to hesitate even about the more modest proposition of which the statement quoted may be said to be a pardonable exaggeration. Can we not say at least, it may be asked, that stone, marble and pigments have qualities which call to be expressed, which ask for and suggest a Notre Dame Cathedral, an Apollo, a Monna Lisa? The negative answer to this question throws much more light on both the material and art than does the affirmative. Stone has its own quality, its own spirit, character, self. We are aware of it when, through hours of walking through an Alpine pass far from all life and vegetation, or in rock-climbing or wandering in a moraine, we become permeated with the massive dumbness, stillness, death, pride or cruelty of stone. But what artist would or could ever express this in stone? This immobility and death, moving and "winged" words or tones or pigments express. On the other hand, stone is used to fashion a winged Victory, live rippling muscle, wind-like drapery, soaring cathedrals. It may speak any language but that of stone and death, be anything but stony. (Are not dead knights and ladies on tombs the least successful achievements of statuary?) Similarly wood too, whether in the living or the

¹ *Art and the Material*, by Prof. S. Alexander.

felled tree, has its own quality. But it is not in wood that we should express this. The business of artistic work in wood is to be anything but wooden. It would seem that in art the material is raised to the n^{th} degree of selflessness and speaks of anything but itself. Perhaps there is for the artist a lesson against subjectivism to be learnt from his material; perhaps he too should express anyone but himself. Some truth there is in the idea here criticised. We may say of stone, as we say of man, that in coming to be other than itself it is still itself, indeed is then most itself; in losing itself it finds itself. It fashions quivering, winged and soaring life as only stone can and in a way which is different from that of music and words or pigments, and in doing so it not only remains stone but is raised to the highest power of stone. But the life does not spring out of *it*. It is a life which transcends it, to which it aspires and which it wins. It is like the beauty of the true ascetic's body, which does not flower from the flesh but is graven into it.

The theory which is here taken exception to might be thought useful for delimiting the spheres of the different arts by their material. "In virtue of the material", Prof. Alexander continues, "one art may be more suitable than another to express a given subject, and a particular art even wholly unsuitable. The same distinction may arise even within any one art which employs various material. Who would put the Apollo of the Belvidere into the form of a Tanagra statuette, or those delightful terra-cottas into marble statues?" But in saying this are we being more illuminating and less obstructive than was the old-fashioned and now rightly rejected criticism which laid it down that certain topics only were fit for verse and others for prose, which ear-marked certain subjects (the lives of kings and queens only) for tragedy and excluded others, assigned some to rhymed couplets and others to blank verse? (If a practical refutation of such criticism was ever needed, this was provided some years ago by some very serious and beautiful poetry written in the form of the limerick.) In so far as it is legitimate to speak of the "subject" of an art (and I do not think we can get very far with this notion) how can we say beforehand what the "subject" of a particular art may be? We can only speak of the past, and state without any prejudice to the future, that it has been this or that. We can say that the rhymed couplet has been used for this, terra-cotta for that, but we cannot say what it may not be used for. Of course, the rhymed couplet if used exactly in the same way as by Pope can only say what Pope said, and terra-cotta worked exactly in the same way as in the Tanagra statuettes

should yield us these only. But this only amounts to the truth that a work of art is organic, that in Pope *his* rhymed couplets are organically connected with his other characteristics, and in the Tanagra statuettes the terra-cotta is organically connected with the other features; that if you imitate one element you must imitate all, and that you should not imitate at all. Of course, the Apollo Belvidere cannot be put into terra-cotta but neither can he be put *again*, *i.e.*, imitated, in marble; we should have either a dead imitation or a different work of art. Similarly Virgil's *Aeneid* cannot be translated into English; but neither could it be translated even by Virgil himself into Latin without making either a vain echo or a real but different poem. It would, however, be bold to make the assertion (refutable by examples) that we cannot have an Apollo in terra-cotta, whether in the form of statue or of statuette, with proper Apollonian dignity and majesty but expressed in terra-cotta's and not in marble's way. I certainly do not like to talk of a work of art as being *about* anything or as "expressing a given subject" or of different works as expressing the same subject. But different artists working in different media may, it seems, draw their inspiration from the same source or through the same channel. The same body or face may inspire one with colour, another with music, or be appreciated by one as colour, by the other as music.¹ Speaking roughly, this truth may be put by saying that they express the same subject in different media, in pigments and sound.² And if this may be said of such different media, why can we not say that the same inspiration or the same subject may be expressed through terra-cotta as through marble, that the same inspiration (in so far as the inspiration may be identically repeated) as is expressed in the Parthenon can also be expressed in brick, provided that the brick architect, just like the marble architect, does not merely imitate the Parthenon marble? If we hesitate to say this, it is because we are inclined to believe that a vision or inspiration is unique and cannot be identically repeated. But the impossibility lies in the difference of persons or of moments and not at all in the difference of the materials.

¹ "Une âme musicale, quand elle aime un beau corps, le voit comme une musique. Les chers yeux qui la charment ne sont ni bleus, ni gris, ni bruns: ils sont musique; elle éprouve à les voir, l'impression d'un accord délicieux."—Romain Rolland: *Jean Christophe. La Foire sur la place*, pp. 104-105.

² All arts, according to Pater, "tend to approach the condition of music." Again speaking roughly, they may be said to express the same thing as music.

The contrast made here at the beginning between conceptual and æsthetic meaning is too sharp. On the one hand, the former needs some embodiment or expression, however much variety it may allow to this while itself remaining identical. Our own thought and knowledge, even of the most abstract kind, become clear, even to ourselves, only in the process of exposition through writing or talking. One particular exposition in particular words of a particular language, one particular mathematical solution of a problem, it may be held, is the ideal irreplaceable explication of a particular aspect of a truth. There may be other words or formulæ expressing different aspects but not the same aspect. Some kinds of thinking as, for example, Metaphysics and even Logic, are very closely bound up with language, especially with syntax and prepositions, and offer as much difficulty to the translator as poetry. And progress in the most abstract thinking, mathematics, is so dependent on a particular kind of symbols, Arabic numerals and, more recently, symbolic notation, that these may be said in some respects to bear the same relation to the thought as do pigments to the meaning of painting, and sound to that of music. On the other hand, æsthetic meaning is not absolutely enslaved to its physical embodiment and does not absolutely coincide with it. Otherwise we should have to say that the *Moonlight Sonata* is that which was performed on a particular night by a particular executant and heard by a particular person (by whom ?) and that on any other occasions it is simply a different work of art and a different æsthetic meaning. But surely it is with some reason that we think that though played each time on a different piano by different executants and heard by different people, the *Moonlight Sonata* is still the same music and the same æsthetic meaning in so far as there is any sameness in the world.¹ We thus get identity of æsthetic meaning with variety of expression. The same applies to a play performed on each occasion by different players with a different setting; to Shakespeare's sonnets as pronounced in Elizabethan and in modern times; to the Iliad recited by Homeric bards, by Plutarch's contemporaries, and by ourselves in a hypothetical Greek pronunciation; to architecture and sculpture affected by the artistry of time and of the weather; to the Velasquez Venus as it looked when first painted and as it looks now.

But if the physical work of art may and must change so much and if nevertheless the æsthetic meaning or æsthetic object can

¹ Music written for the voice is also set for the violin and still called the same music.

still be said in some way to remain the same, the two, the changing and the unchanging, cannot be identified. An inferior execution on a bad piano and a comparatively good performance on a better instrument may both help me to apprehend the meaning of the *Moonlight Sonata*, and the perfect execution I may never get.¹ Hence the æsthetic meaning or object which I apprehend has no physical existence since the latter is certainly not to be identified with any execution short of the perfect. The physical existence we might perhaps be tempted to find in the musical notation or in the written words or in the fresh painting, building or statue, untouched as yet by time. But these may for the artist himself bear but a remote relation to the beauty which he apprehended and which we too may apprehend through the power which even imperfect instruments have of referring to meaning. It is not only mystics like Richard Rolle who tell us that "sweet ghostly song accords not with outward song, the which in churches and elsewhere is used. It discords much."² The sensuous Keats also holds "more endear'd" "the spirit ditties of no tone" piped "not to the sensual ear." "Cette musique intérieure," says Romain Rolland, "est mille fois plus riche que celle qui l'exprime." The work of art then is only the instrument which we use to communicate the object of our æsthetic apprehension, both to ourselves and to others. It refers us to it and helps us to concentrate our attention on it. Though no doubt it is more closely connected with that to which it refers, its function of reference is not so very different from that performed by the words of a scientific, or the symbols of a mathematical, treatise. Only on the supposition that æsthetic meaning or beauty is not identical with and not confined to physical expressions, whether in natural objects or works of art, can we understand the case of a man like Plato who, possessed of a keen appreciation of beauty to which he assigns supreme value, and moreover himself a supreme artist, yet has so little use for the world of sense, and while giving the highest place in the scale of souls to the lover of beauty, the *φιλόκαλος* and *μουσικός*, ranks the poet and artist last but three, placing them only just above the manual workman and

¹ Nor is it always demanded: "In our country . . . they do not mind any harshness of voice or uncouthness of gesture in the exponent of a perfectly formed melody; on the contrary, they seem sometimes to be of opinion that such minor external defects serve better to set off the internal perfection of the composition—as with the outward poverty of the Great Ascetic, Mahadeva, whose divinity shines forth naked."—*My Reminiscences*. Rabindranath Tagore.

² Quoted by Evelyn Underhill in *Mysticism*.

the agricultural labourer.¹ Nor is Plato's attitude, at any rate to works of art, unique or attributable to his metaphysical theory. All artists worship Beauty, who is to them a goddess, but not works of art, which to them are not even necessarily her shrines. "Un musicien" (to quote Romain Rolland again) "ne se nourrit pas seulement de musique. Une inflexion de la parole humaine, le rythme d'un geste, l'harmonie d'un sourire lui suggèrent plus de musique que la symphonie d'un confrère." Great creative artists sometimes attach surprisingly little importance to works of art, even their own, just as great thinkers often make but little of books. It is only those who have not seen the reality who deify the shadow.

What then is an æsthetic object or æsthetic meaning or beauty? It is not a concept; it is not "typical" or "generic"; it is not an individual of perceptual experience (this mountain, this man), or a historical situation, like the battle of Salamis or the Great War; it is not a feeling or emotion (love or anger). It is an individual quality or qualitative individual, like this particular shade of green, this particular sound.² To evoke or to refer to an example by means of words, I should have to put these together in such a way that they will make a poem or at least a poetic phrase like "green felicity", or "a green thought in a green shade", or "the foamless long-heaving violet sea." Further, it might be contended, the æsthetic object is not only like a sense quality but it is itself sensuous through and through; it is sound and colour and not merely apprehended through these.³ Nevertheless, even if it is sound or colour or what is seen, it differs in important respects from ordinary sound or colour.

The latter are sense-data apprehended in sensation. The vision of the artist is a rhythm, harmony, patterned quality, which does not come to him necessarily as a sense-datum or in a sense-datum. The deaf Beethoven presumably had no sense-hearing of his own music. Mozart heard his, but as he himself tells us in the often-quoted passage, with a hearing which could not be that of sense: "I don't hear the notes one after another, as they are hereafter to be played, but it is as if in my fancy they were all at once." In a written poem what imaginary sound even do we hear? Matthew Arnold's "the foamless long-heaving violet sea" seems to me to evoke for me rather a rhythmically wavy line than sound, or if sound, then assuredly

¹ *Phædrus*, 248 d-e.

² See *MIND*, N.S., XXXII., 128, and XXXIII., 129 and 130.

³ I have myself implied this in the articles referred to.

not that of any normal English pronunciation which I have heard or am likely to hear. To hear poetry "read" even by poets, like seeing Shakespeare acted, is generally an irritation and disappointment. On the other hand, not to be sure of the pronunciation of a language seems not to diminish but rather to enhance our enjoyment of poetry in it. Perhaps many know the experience of having an earlier and keener appreciation of Latin and Greek than of English poetry or of receiving a shock to their enthusiasm for the French Alexandrine by coming to know French as pronounced by Frenchmen and used for everyday purposes, as English is used. The æsthetic object then is primarily imagined sound or colour or shape and only secondarily and subsequently sense-produced and sense-apprehended, while ordinary sound or colour or shape is primarily sense-apprehended and only secondarily and subsequently given in imagination in the form of memory images. Thus the æsthetic object differs from the work of art which also is primarily an object of sense experience.

The hearing or seeing of the imagination, unlike sensation, is a synthetic or, in Coleridge's words, coadunating or esemplastic activity. If we can be said to hear or see the æsthetic object it must be with a hearing which hears moonlight and sunlight, softness and sweetness, wetness, odour, and taste, and, as maintained by Romain Rolland, the colour of eyes; the seeing is one which sees perfumes and loudness and sharpness. The domain of beauty is that "where music and moonlight and feeling are one," where "three sounds" make "not a fourth sound but a star," where, in Ruskin's words, "a stone, leaf or shadow" has "meaning and oracular voice," where, according to Pater, an instant, a gesture, a smile, absorbs all the past and future in an intense consciousness of the present. It is a world which thus differs from that of sense experience and to which anything drawn from the latter, the materials of a work of art, can do no more than refer.

But—and this is really the crucial question in the philosophy of beauty, and it is by the answer to it that the position taken up here differs radically from that of Prof. Alexander—is the world of the imagination independent of the world of sense experience? Is it anything more than a product, a reflection, a memory of the latter? Which is primary and prior, sensation or the imagination? For sense-data, for sound and colour, sensation, as we have said, is prior. We may have images of them, but only memory images. These *sensa* and images of them form the store from which the artist builds up his work

which is thus primarily an object of sense-experience. But in selecting from this store and in rejecting, in the continual process of correction, he is guided by the apprehension of that which is given neither as a sense-datum nor as a memory image and which is the æsthetic object or meaning. If we hold that this too is found in sense-experience, then we must believe that in the wailing of the wind, in the patter of leaves and in the sound of waters, or in the music of other composers, Chopin heard not only the individual notes which make up his *Funeral March* but also the unifying life or harmony which made him select some rather than others, that Shakespeare found in the English language not only the individual words but the meaning of his *Hamlet*. Alternative hypotheses might be that the artist is guided by nothing but a feeling of satisfaction or dissatisfaction with the sense material as it emerges, or else by a concept or conceptual scheme which becomes individualised only with the finding of the material. For various reasons which cannot now be given all these theories are here rejected. That to which we are inclined is that the artist apprehends an individual quality which is neither what is seen nor what is heard; that this quality is in a sense prior to the work of art and to sense-experience and guides the artist in the selection of the material which is to form the work of art and to refer to this quality; that it is apprehended by the imagination and that the latter is properly neither seeing nor hearing. The imagination associates itself with, uses and quickens any of the senses, now that of hearing, now that of seeing, and where neither of these is present, the others. It is this which explains the fact that those who are bereft of what we are inclined to regard as the indispensable æsthetic senses, hearing and sight, are not entirely without æsthetic imagination and enjoyment. The testimony of the blind Professor of Literature, Pierre Villey, in a recently published study of the blind, which also takes account of the deaf blind, is striking: "The æsthetic emotion felt as a result of visual and auditive sensations," he writes, "is not produced by those sensations. It has its source much deeper within us. It comes from the very roots of our being, from the inner depths of our consciousness and it is capable of shading with an æsthetic tint the whole mass of our mentality, even to our very simplest impressions."¹

What has here been said of priority must, it is true, be hedged in with qualifications. It is the priority of all *a priori* knowledge. Our knowledge of the law that every event must have

¹ *The World of the Blind*, translated by Alys Hallard.

a cause is said to be prior to the empirical discovery of this or that cause, because without the former we cannot have the latter. Similarly, our notion of number is prior to and cannot be derived from our counting three apples, five chairs, etc. ; if we had no notion of number we could not count. Yet it would be wrong to say that we could have the notion of universal causality or of number without ever having found out a cause or done any counting. In the same way, it is perhaps wrong to imply that we can apprehend beauty or the æsthetic object without either contemplating natural objects or making use of words, sounds, colours or shapes, that is, without sense-experience. There can be no strict before and after in this or perhaps in any other question of the mind. What Prof. Alexander so strongly emphasises and what I have myself insisted on in the articles quoted, I am inclined still to maintain. It may be that the artist does not know what he wants to say until he has said it, in words, or colour, or stone. By these he communicates not merely to others but to himself also. (His case, however, we must repeat, is in no way different from that of the philosopher, scientist or mathematician. The point made throws light more on the psychology of æsthetic or of conceptual apprehension than on the nature of the object æsthetically or conceptually apprehended.) Yet even if the apprehension of the æsthetic object develops only *pari passu* with the building up of the work of art, the former activity may still be said to direct the latter and in some sense even to be prior to it. Perhaps the best way of expressing this is to say that it is because we apprehend beauty, and in apprehending beauty or the æsthetic object, that we contemplate nature and make or contemplate works of art. We may illustrate the relation of the æsthetic object to the work of art, and the relation between their respective apprehensions, by the analogy of what happens in two cases, that of the translation of poetry and that of recollection.

Poetry is notoriously impossible to translate. Yet its translation always is and always will be attempted and it has its uses. It is useful and is meant, at least in its higher reaches, for those who already know the original. While translating, the translator seizes and communicates both to himself and to others certain excellences of the original. Translating is one of the ways of appreciating the latter and of focussing the attention on it. Yet the original, though it emerges more clearly in the process of translating, is never adequately transferred to the translation and cannot be adequately known only from that.

An activity which in some respects closely resembles translation is that of recollecting or remembering. In recollecting a scene, an event or experience of the past, we set up a train of images. The images, we must perhaps say, can never be identical with the past.¹ At any rate these we continually change or replace by others while the past remains unchanged. When we fix upon one which is most satisfactory we seem to be conscious that it only resembles the past and therefore that it cannot be identical with it. If this account is correct, then, although the images are not the past experience, event or scene, and although the latter can never be given in the form of an image, yet the recollection of the past is effected or at least invariably accompanied by a train of images none of which is the past. Indeed we seem to be aware both of the past and of the images and to be comparing the two. Perhaps we should say that the past is immanent in the process of correcting the images.

The æsthetic object, according to our theory, corresponds to the original translated or to the past experience, event or scene recollected; the work of art corresponds to the translation or to the memory images.

In all this we have referred more to æsthetic creation than to appreciation. But the two do not differ fundamentally. Both pre-suppose in a qualified sense the awareness of the æsthetic object. It is because in some way we are already aware of the same object as the artist, that his work can, as it were, remind us of it, or quicken and awake our awareness. When the work does this, we are reading or appreciating it.

The so-called creation is not entirely creation, or making. The artist does of course make the work of art, the poem, painting or statue. (Prof. Alexander does not seem to allow for this.) But he does not make the beauty, or the æsthetic object. That he discovers, just as the scientist discovers the truth. But he discovers it not in the marble or pigments, not in the world of sense,² but in the world where numbers and the other objects of *à priori* knowledge are discovered; in Plato's words, not *here* but *there*.

The difference, in spite of the close association, between sense and the imagination and between their respective objects, here indicated, Plato expressed by saying that although beauty is

¹ I am not myself certain about this. But Dr. A. C. Ewing in *MIND*, N.S., XXXIX., 154, p. 143, categorically denies the identity.

² Nature is related to the æsthetic object or to beauty like a work of art. Like the latter it refers us to beauty.

ἐκφανέστατον,¹ most visible, through appearance, yet to sense it offered only an εἶδωλον or image, though a clear one, ἐναργές. We may sum up the contention by saying that the imagination is a kind of supra-sensual *à priori* sense, and beauty or the æsthetic object of the imagination is, as it were, a supra-sensual sensum.

¹ *Phædrus*, 250 d.

III.—AN EXAMINATION OF BOSANQUET'S DOCTRINE OF SELF-TRANSCENDENCE (II.).

BY RALPH E. STEDMAN.

I.

IT will be remembered that the doctrine of self-transcendence is Bosanquet's method of reconciling the many and the one, where the one is what he calls 'individual'; and that in this connection we are faced with a paradox, namely, that in order to make a show of saving the appearances and at the same time to hold to his individual absolute, such a doctrine must be formulated; and that this same notion of individuality cannot but make the doctrine nugatory.¹ Now the notion of individuality issues from a certain theory of identity, which here falls to be considered.

The chief element in Bosanquet's theory of identity is that there is but one type of identity in the universe, *i.e.*, the type which he calls 'concrete' or 'lateral' identity, and which is expressed in the character of the individual—a meeting-point of differences which are assimilated in the unity of the whole. This is the identity of the continuant individual. Prof. Kemp Smith² traces this feature to the absorption of the interest both of Bradley and Bosanquet in the Hegelian category of 'identity in difference,' because of which they came to consider the two types of identity apparently present in our world—*viz.*, that of the continuant thing or individual, *i.e.*, the identity that exists in and through differences, and of the recurrent character, or of the type which recurs amidst differences—as fundamentally exhibitions of the same principle. The only differentia they saw in the *degree* to which the identity dominated or was dominated by the differences. In consequence of this the type of identity in which differences tended to dominate the identity came to be regarded as the *lower* form—and imperfect manifestation of the *true* form.

¹ See my previous article, pp. 162-163 above.

² In *MIND*, vol. xxxvi. Cf. "The Fruitfulness of the Abstract" in the *Proceedings of the Aristotelian Society* for 1928.

Wherever, therefore, the 'lower' form of identity appears we are assured that the 'true' form lies beneath. The 'Orchidean Order' or the 'Rose Family', according to Bosanquet, is an *individual* or concrete identity, the genera, species or members of which are the constituent differences.¹ There is no such thing in reality as *mere* recurrence, or mere identity of character in several contexts. In order, therefore, to be consistent, Bosanquet must insist that what we take for identity of recurrent character is similarity based upon a degree of individual identity. One rose is similar to another not because it embodies identical points or characters, but because the two alike are differences within the individuality of the rose family.

It clearly follows that, if all identity is of this one type, there can be but one individual or real identity, which is the Absolute, a conclusion Bosanquet does not hesitate to draw. And upon acceptance of this theory of identity he holds success in logic and metaphysics to depend.²

It is, however, obvious that this theory must come to some terms with recurrent identity, *i.e.*, identity of type. For, as Bosanquet admits, we rely for knowledge upon our ability to recognise, in new situations, characters which have come to us in quite other connections. His whole section on 'naming' in his *Logic*, is an extended admission of recurrence which, so far as the needs of knowledge are concerned, is strictly what it seems, *i.e.*, of characters which in diverse contexts are 'the same'. "The point and purpose of naming is to refer to the same."³ Also, "That which the name signifies *is, for us at all events*" (last five words my italics—they show the qualification to which he must resort), "an identical character exhibited by different contexts or different contexts united by a common character".⁴

He speaks further, without any qualification, of "Two or more uses of the same content" and also thus: "If you try to elicit the basis of its" (*i.e.*, an individual's) "identity you will merely pick on elements of identity" (here recurrent identity) "between different contexts". Again, "All reds that match are the same".

Such passages as these would seem to commit Bosanquet to a modification of his view of identity, but his course is rather to make these concessions where there is no alternative, and to return without change of mind to his view thereafter. He will

¹ See *Logic*, vol. i., pp. 212-213.

² See his paper "The Philosophical Importance of a True Theory of Identity" in the posthumous volume *Science and Philosophy*.

³ *Logic*, vol. i., p. 15.

⁴ *Ibid.*, p. 13.

not allow that these necessities of logic and knowledge are binding in the metaphysical sphere. Indeed, quite inconsistently with these utterances, he turns, when in his more characteristic vein, these elements of identity into 'mere resemblances'. When commending the 'concrete universal', especially, does he fall into this depreciatory style. We read, for example, of that which "*Passes for the characteristic principle of knowledge and intelligence—a principle depending on repetition of similars and recognition of them as they recur*".¹ But why 'passes for'?

After considerable study, I fully agree with the observation of Prof. Kemp Smith that these two veins—of more or less grudging admission of recurrent identity, or the 'abstract universal', and the repudiation of it—may each be traced through the writings of Bosanquet, but that no serious attempt at their reconciliation can be found. The answer to the question whether for Bosanquet there is any identity 'unpenetrated by difference'² must be that there is none. He is committed to the extreme view that all identity is penetrated by difference; but he seeks to save himself from nominalism by asserting his alternative form of universal which is at once, he insists, the nerve of reason and the nature of the real. But upon examination it turns out that this concrete universal will not serve for knowledge, but must be supplemented by its 'weakened form' in order that by 'picking on' elements of recurrent identity we may arrive at the individuality underlying these repetitious instances. The two-fold truth of the matter seems to be that for knowledge we must have universals which are not, as such, individuals; and that in reality no universal is actual except as embodied in individuals which are not, as such, universals.

The effect of Bosanquet's concentration upon the continuant type of identity as the exclusive form—to the neglect, softened by occasional assertions of the sort quoted above, of the recurrent type, is, by a nemesis peculiarly just, to do away with the type of identity it seeks to favour except as it is embodied in the one ultimate individual; or in other words, to banish it from our world of 'appearances' altogether: and, if we pursue yet further—as I propose to do in a brief discussion of 'difference'—the effect of this same preference, we reach the conclusion that even this absolute individual must be denied the character of individuality, which must follow teleology and other rejected categories into the discard, to give place to a veiled but total scepticism as to the nature of the real. Individuality is

¹ *Principle*, p. 32. My italics.

² Prof. Kemp Smith, *op. cit.*, pp. 143 and 265.

'identity in and through difference', but by his account these differences are merely of degree in the same scale—differences which cannot, I would urge, be deemed significant as constituting a differentiated unity, a faint analogue of which is the organism—sustained by heart, brain, blood and bone—that we call the body.

By making his Absolute the sole true identity Bosanquet denies the self-identity of any thing. This step he takes without hesitation; *e.g.*, when stating his view against the objections raised by Prof. Pringle-Pattison in the symposium, "Do Finite Individuals Possess a Substantive or Adjectival Mode of Being?"¹ He repudiates the 'popular attitude' which, "Alike in contemplating the natural and the human world . . . models itself on the *apparent self-identity* of the movable and self-coherent body" and which "is reinforced by the current conception, an alternative expression of itself, which confines identity to linear or successional continuity, the so-called existential or numerical identity of the individual thing". On the next page he objects to the "doctrine that identity is *exclusively* numerical".

We may mark in these passages not only the depreciatory terms 'apparent' self-identity and 'so-called' existential or numerical identity, which amount precisely to a denial of their reality, but also his characteristic over-statement of the case against him. To his opponent he ascribes a position not merely sufficient to contradict his own, but its contrary, which is no less clearly false. It is maintained against Bosanquet, not that identity is confined to—or is exclusively—linear or recurrent, but that there are two types of identity, the identity of the continuant and identity of type, neither of which can be ignored in an adequate theory. And that this is the 'popular attitude' the distinctions persistent in language between thing and character certify.

We may also note that in these passages it is his favoured type of identity which is condemned. In the *Logic*, however, he asserts the view he generally denies.

"A pebble or bit of rhomboidal spar . . . has a self-relation, a characteristic peculiarity which makes it single and distinguishes it as a persistent universal" (*i.e.*, an individual), "from things external to it."

And in another connection,

"There is no ultimate reason for taking one complex, at least below conscious individuals, as a single being more than another".²

¹ Supplem. vol., *Proceedings of the Arist. Society*, "Life and Finite Individuality", p. 89. My italics.

² *Life and Finite Individuality*, p. 79.

Why then, we may inquire, is it named a 'pebble' or 'a bit of rhomboidal spar'? and what is its self-relation and characteristic peculiarity if it does not permit us to predicate securely of it as a self-identical being, so long as the appropriate conditions of its being are maintained? And it must be recalled that consciousness, according to Bosanquet, introduces no new principle into individuality, and that his qualification on behalf of 'conscious individuals' is therefore inconsistent.

A consequence of the denial of self-identity is that that which *appears* to be individual is *really* the Absolute. This region of Bosanquet's philosophy is, as it needs must be, confused, and cannot be clarified. Its fundamental argument comes to this, that since the Absolute by hypothesis is alone real, and since there are *apparently* finite individuals, it follows that when all accidents and illusions have been stripped away, they are in essence the Absolute. In his more usual and less precise mode of expression, Bosanquet speaks not of the reality of the thing as the Absolute, but of its *perfection* or *completion* in the Absolute which it more or less remotely anticipates. But if *my* perfection is the Absolute, then essentially I am now the Absolute. And a perfection is never the perfection of nothing.

The tangle in which speculation is involved, if attempted upon this basis, needs no pointing. Prof. Stout so contended in his contribution to the symposium. "If . . . I am the universe," he wrote, "I may legitimately mean the universe when I use the words 'I' or 'myself'".¹ Such a supposition is self-condemned: it cannot be seriously admitted into philosophy, and in consequence of his acceptance of it Bosanquet is compelled to play fast and loose with language, and with his own principles, in order to philosophise at all. For example, in spite of the hard things he has to say of finite individuals in the symposium, he spends a large volume in discussion of their value—'substantive' value even—and destiny. But the history of philosophy is full of doctrines which, if applied, would cut the root of the tree that bore them.

¹ *Life and Finite Individuality*, p. 137. Prof. Stout points out that this confusion issues from Bosanquet's failure to discriminate the conditions of a being and the being itself. Because the finite being "cannot be guaranteed to exhibit within itself the conditions of the attributes we assign to it", Bosanquet concludes that it has no right to those attributes—in short that it has no essence of its own. But it is surely manifest that the conditions of a being are other than the being conditioned by them. Bosanquet holds, for example, that the soul or self *is* the body, because it is clearly conditioned by it. But this makes explanation impossible.

We may remark a significant qualification of the view we have been criticising. Bosanquet observes that the finite individual enjoys "The character of being something which has *its main being* and value as a qualification of a whole which includes it".¹ This expresses his general view with the exception of the qualification italicised. What account has he to give of this *remainder* of being and value? According to his theory its *whole* being and value is to be the whole. Evidently even the author of the view is averse to its full conclusion.

II.

All difference is, according to Bosanquet, difference of degree; and the reality, of which every difference is a degree, is really continuous or homogeneous. I wish to show—what scarcely needs to be shown—that if this were true there could be no significant difference at all.

Every identity, we are told, is an identity in and through difference: and this identity, which is variously called the individual, is nothing but the differences which meet in it—these differences being assimilated to the unity (what Bosanquet calls the 'differentiated wholeness') of the individual.

Bosanquet's preference for the concrete universal he commends by pointing out that 'it takes all sorts' (*i.e.*, all kinds) 'to make a world'. The abstract universal, on the other hand, leads to 'class relations' only, or to 'mere generalities'. Its defect, in a word is that it adds like to like: but the true identity or universal, the individual, is best described as a world or cosmos because it is a meeting-point of differences. It is agreed that, to constitute an individual, differences of kind must meet; but has not Bosanquet made unattainable for him the truth he seeks to establish, since he insists that all difference is of degree only? It is true that he *asserts* of his philosophy that it 'admits of genuine differences of kind within the whole', and we can recall his reproaching Bradley with neglecting these differences;² but how, we are bound to ask, is 'difference of kind' compatible with 'the continuum of the whole'?

If, then, the differences which meet in the individual are merely of degree, at bottom his concrete universal or identity is what he deplures as characteristic of the abstract universal; it is no more than a laying side by side of like and like. His formula falls into this series. Differences are differences of

¹ *Life and Finite Individuality*, p. 85.

² P. 162 n. above.

degree of individuality; but individuality is itself constituted by differences which are themselves differences of degree of individuality . . . and so on . . . ad infinitum.

The moral of this extremity is that philosophy no less than life is impossible without differences of kind. In degree individuals may differ within the limits of one kind—as one man is more of a man than another, and the same man more of a man at one time than another—and in kind as between men and animals. These differences of kind must be deemed radical in reality, even though between them an historical continuity from stage to stage of physical, organic or intellectual constitution may be shown. Thus we have a system of individuals, each of them wholly—and in a manner partially determinable—dependent upon other individuals of like and of other kinds; in the case of man, upon 'nature', his 'second nature' of society and institution, and by the mediation of all of these, and of further conditions known or unknown, upon God.

The consequence, I conclude, of Bosanquet's theory of identity¹ and of difference is that the notion of *self-transcendence* in his philosophy is anomalous since it demands distinctions which the general theory denies.

III.

This conclusion, however, Bosanquet might oppose by referring to his doctrine of 'negativity' which holds an important place in the Gifford Lectures. To this we now turn.

"Negativity", he writes, ". . . is fundamental in all that is real. It is the same characteristic which has been described as the fact that experience is always beyond itself—the character, indeed, which we have described from the beginning as that of the universal, or in other words, the tendency of every datum to transcend itself as a fragment and complete itself as whole." "A true negativity, say, an organised universe of desire, is a solved contradiction." And, "What we must have, . . . for negativity to be manifested in, is the content of life, pain, conflict, sacrifice, satisfaction."²

¹ It may be remarked that Bosanquet is, to all appearances, unable to envisage any middle term between 'individuality', in his sense, and 'isolation' and 'independence', and therefore cleaves to what he is persuaded is the better alternative. But relatedness and conditioned individuality afford a *via media* which is not excluded by the refutation of isolation and independence. Bosanquet writes, *e.g.*, of 'isolated terms in relations'. But surely relation excludes isolation, and *vice versa*. Were it not outside of the theme of this paper the affiliation of Bosanquet's (and Bradley's) doctrine of identity and his Bradleian view of relations might be shown.

² *Principle*, pp. 231, 232, and 239 respectively.

From this it would appear that negativity is simply one more synonym for individuality or self-transcendence : it is actually their supplement.

It is another example of the 'pseudo-logical' notion in his philosophy. Its first derivation is from a restricted logical truth, but its application is metaphysical.

The logical point from which Bosanquet derives his view of negativity is this, that negation is a means of significant assertion. He cites the example, "There is no truth", by which the truth of this one proposition is asserted. There is no need to take objection to this ; but somehow Bosanquet advances, upon this ground, to the assertion that 'negative and affirmative grow *pari passu*'.¹ This is a questionable step, but were it valid our chief objection to his doctrine would remain, which is that this assertion is thereupon transferred from the sphere of logic to the sphere of being or reality. "Negativity" then becomes "fundamental in all that is real".² The purpose of the transplantation is that there shall be, within his scheme, *i.e.*, within the pale of individuality, the distinctions and differences which it is the business of philosophy to explain and not to explain away. It is, according to Bosanquet, by negation—by the 'successful embodiment of negativity' which remains after the resolution of a contradiction—that the differences taken up and transmuted in the upward transformation into which every being is forced by the self-transcendent or non-contradictory work of Thought, are not done away with, but are, we are assured, made more of.

His argument runs thus : the presence of contradiction and defect in the individual compels his self-transcendence, but 'something survives the resolved contradiction' which is a 'successful embodiment of negativity'.³ The characters or elements which jarred and were brought together in a harmonious whole by the self-transcendence of the individual are present in the new individuality by way of 'negativity'. The limiting conclusion is that negativity is 'deepest in the most perfect experience,' *i.e.*, in the Absolute.⁴ By this means he proposes to save 'otherness' in spite of—he would say, in the terms of—individuality. The scheme of self-transcendence points to 'absorption' in the whole of all difference, nor does Bosanquet balk at so strong a term ; but, if the principle of negativity holds, that which is absorbed is 'more real' in its last state than in the first.

¹ *Principle*, p. 232.

² *Ibid.*, p. 231. *Cp. Logic*, vol. i., p. 291.

³ *Ibid.*, p. 230.

⁴ *Ibid.*, p. 233.

Two objections may be urged. It is erroneous, I have insisted, to call desire or pain 'contradiction', or to assert that 'contradiction' is 'an actual existent' in finite individuals: ¹ it is also erroneous, and a psychological absurdity, to maintain that desire is present by negation when it has been satisfied, or pain when it is relieved. Desire—in its bodily and instinctive expressions with which, for the sake of simplicity, we may solely concern ourselves—arises out of the constitution of the organism, and when satisfied is *absent*, though its renewed possibility and recurrence may be predicated in view of the nature of the organism. It is simply absent, and is not present by 'negation'. Bosanquet speaks of an 'organised world of desire' and it is true of the cultivated man that his desires do tend to conform to an inner harmony—this, at least, is the aim of all moral education. But by this phrase Bosanquet means to indicate the presence in a new individuality of elements once seemingly in contradiction. Are these 'crude elements', however, present, or are they not? If the moral education is successful, then the old desires simply are not there in their old shape. The new character is reached only by way of the old, but if it is a new character it is surely wrong to suppose that the 'old man' is there 'by way of negativity'. In real life it is a fact that the old desires *do* crop up time and again, but this is a sign of the defect of the 'harmonious world' which thereby shows itself to be inharmonious after all. But according to Bosanquet—and this point must be stressed—the presence (by negation) of all the contributory elements *is a factor of the perfection of the new individual or character*.

So too with pain, which is a sensory phenomenon (and in man is either intensified or relieved by mental elements). It is either present or absent, but cannot be both at the same time, as, according to Bosanquet's theory, it is. There is a truth which may be granted, which is that the individual does 'learn by the things that he suffers'. He becomes more—or he *can* become more—his character may deepen, as a result of pain; and so, remotely, we may say his pain is 'present' in his character. But the simile is dangerous to good theory. Actually the pain is absent, though it may recur owing to the continued presence of its accessories and conditions.

Secondly it may be objected that not only is the doctrine of negativity inapplicable in those (in the examples cited, psychological) situations where Bosanquet seeks especially to

¹ Pp. 165-166 above.

commend and enforce it, but he commits the further error of supposing it to obtain—on the strength of these, and similar, illustrations, and of his keen theoretical need of it—over the whole realm of process and reality, or in his terms, over the whole field of self-transcendence.

But, in addition to the general inappropriateness of this logical term thus used as 'a fundamental feature of reality', may we not maintain that it is mere assertion, unsupported by evidence of any kind, to say—to take a low, but certainly relevant example—that a chicken eaten is as real a *chicken* as it was in the poultry run? It is the precise individuality of the chicken—a random example of the inexhaustible variety of real individuals—that Bosanquet's philosophy of 'individuality' fails to give any account of, and which it ignores. Against Bosanquet I hold that so long as the appropriate conditions of the existence of a finite individual or thing stand, there can be no question as to its reality—except those concerning *what* it is—and that if its reality is absorbed in that of another—as Bosanquet insists that all finite reality is and must be—then there can be no further ascription of reality to *it* either by way of negation or in any other way. If the conditions of its being are withdrawn, then it simply *is not*. The doctrine of negativity does not, I think, warrant Bosanquet's reliance upon it, nor does it call for a modification of the conclusion which, on the grounds of his theory of identity, I have drawn.

IV.

This examination cannot be closed without mention of the many alleged examples of self-transcendence which Bosanquet cites, chiefly from what are called the 'higher experiences' in man. But if my general conclusion holds there is no need to linger over them. The following is a characteristic example:¹

"There is nothing in the world worth having, doing or being which does not involve a self-transcendence. . . . Think of the attitude demanded of one by, say, a masterpiece of art. . . . You scarcely recognise yourself when . . . Beethoven has laid his spell upon you."

Certainly the contemplation of a fine picture, the reading of a great poem, or attention to a symphony of Beethoven, does, if we are educated to and able to appreciate them, make a change in us: it compels a sharp focus of interest and induces in us new and strong emotions, such that we 'scarcely recognise ourselves'. But does this change of feeling evidence a real

¹ *Principle*, p. 60.

shift of the centre of being or individuality? I am unable to see any connection whatsoever between the fact—which none would wish to deny—that in æsthetic appreciation the focus of consciousness, the character of our feelings, is really other than that of our commonplace or otherwise specially engaged moments, and that in consequence—if we went to the trouble of self-examination in the midst of it—we should notice the difference, and Bosanquet's conclusion that in this situation we have an 'absolutely conclusive' example of self-transcendence, by which he means that *our* individuality is absorbed in some englobing individual—in this instance, possibly, the common soul of the company producing and enjoying the music. If in musical appreciation we were really carried beyond self-recognition (to say nothing of self-identity) then, on coming to ourselves, we should know nothing about the event. The appreciation, in short, must be *ours*, and it is this personal possession which Bosanquet is driven in theory to deny.

Now in such situations we may, I think, admit a *sense* (composed largely of elements of feeling) of self-transcendence. We may go so far as to say that, were it not for certain *feelings* of self-transcendence the *doctrine* would never have been formulated. To generalise: in differing mood and situation the fluctuating body of feeling, so largely determinative of the individual's sense of self, may itself be noticed as now more, now less intense, then of one kind, and now of another, and thus, by this dual fact of continuity together with profound difference may afford what may be called a feeling of self-transcendence. Now if Bosanquet were prepared to acknowledge to the end what he has called 'the subjective centring of experience', and to agree that a centre is still a centre even though its circumference vary widely, then he might justly make use of this feeling of self-transcendence which belongs exclusively to the subject's point of view. But this he is not willing (or is not able) to do, and his use, therefore, of the subject's sense of self-transcendence is by it to illustrate a movement in reality by which the subject stands revealed no longer under its *prima facie* appearance of subjectivity, but—so he asserts—as it truly is, *i.e.*, as an adjective of the Absolute—in other words, to illustrate a movement by which a centre, the circumference of which is wholly taken into a larger circumference, ceases to be or to appear as a centre because its content is gone to enrich some wider sphere. Surely this use comes little short of abuse.

In these 'higher experiences' it is obvious that Bosanquet can find endless examples of self-giving, and of growth in depth

and range of the individual, but, though he describes them indiscriminately as self-transcendences, he is not entitled so to do. There is, it is true, a sense in which any growth of character or personality may be called a self-transcendence, since the individual concerned is at once the *same* and *more* subsequent to his growth. But so to say is not very illuminating, and is liable to grave misunderstanding. It suggests, for example, a being which is, so to speak, static, having certain definite boundaries about its being which in self-transcendence are over-ridden. In denying that the finite individual is of this nature I am in agreement with Bosanquet; and it seems all the stranger that he should so emphasise a notion which demands what he denies. The finite individual has a being and essence, but is without what may properly be thought of as a 'boundary', since a boundary belongs to a material thing. This by no means commits us to Bosanquet's theory—which we may repudiate—that there are no limits within the universe which the finite individual cannot 'in principle' overcome and so become the Absolute. Its growth or diminution is within the limits and conditions appropriate to its kind: it is a 'finite' being, not, as Bosanquet ambiguously names it, a 'finite-infinite' being; and within the limits of finitude—which may be deemed horizontal, thus setting no barrier to expansion while finally proscribing any upward decession from its kind and place—it really grows. This last is a further departure from the point of view of Bosanquet, whose notion of self-transcendence involves a shift of the centre of being and value from the being 'absorbed' to that 'higher experience' to which it is contributory. Within the limits of Bosanquet's theory it is as incorrect to speak of the 'growth' of anything as it is unqualifiedly to speak of its identity or reality. The benefits of self-transcendence all go to the credit of the Absolute. The point I wish to maintain is that there is a 'Wesenbildung', a real growth in character and personality, in the being of the finite self. To speak of one individual as 'contributory' to another is to flee from evidence to mythology, since in no realm of our experience have we any data to warrant it.

I do not suggest that such a view of the reality and growth of the finite being raises no difficulties in philosophical construction, but I do maintain that it is all important to envisage the problem as large enough to include it, and in attempting a solution to abate no difficulty simply because it is a philosophical nuisance. The need in this particular is for a theory which will maintain the individual's point of view, and will credit to

him his own growth instead of lumping all gains in the one account. This Bosanquet is averse to, as it threatens him with pluralism (since he rejects relations as holding in reality) and with a universe which grows as a whole. With his dislike of a theory which posits a growing universe we may sympathise, but not with his rejection of the finite reality and growth, within the limits of finitude, of individuals, on account of this dislike. The just course would be to suspect the adequacy of our apprehension and statement of the metaphysical necessity supposedly in conflict with the acknowledged 'appearance'. Our notion, for example, of 'the whole' is probably very much too simple-minded. I cannot but feel—perhaps unfairly—that Bosanquet, in protesting against any theory which involves a 'reality which changes as a whole', has in his mind's eye a sort of Parmenidean sphere: but this picture is drawn directly from the pattern of sensible objects, and we have no reason to be confident that in a universe of which spiritual individuals, or persons, are members, and which *may* be ruled by a Being of the nature and activities of whom these persons afford a very imperfect and weakened analogue (in this, in his own way, Bosanquet is emphatically with us), such pictures apply. Probably they do not. How the diverse realms of reality are unified—the question to which the doctrine of self-transcendence purports to be an answer—we may not, now or ever, know: but such ignorance of ultimate matters need not drive us a single step towards scepticism, nor does it stultify philosophy, the task of which is neither to set a limit to, nor to educe new knowledge, but to construct as best it can without rejecting any of its data.

IV.—THE KEY TO KANT'S DEDUCTION OF THE CATEGORIES.

BY H. J. PATON.

I.

IF there is any doctrine on which Kantian commentators are agreed, it is the doctrine that for Kant the forms of judgement are the forms of analytic judgement only. The question then arises, "How can the forms of analytic judgement be a clue to the categories, which are principles of synthesis?" To the question in this form there can be no answer. It is irrelevant to appeal, as some do, to the fact that all analysis presupposes synthesis. We are forced to conclude that the metaphysical deduction of the categories lacks even elementary plausibility, that it is another example of Kant's pedantic devotion to "Architectonic", and is to be explained as due to the childish desire to find parallels between formal and transcendental logic.

It may seem a foolhardy and futile thing to question a doctrine so widely accepted.¹ I will not venture to say outright that it is false, for in the immense mass of Kantian literature there may be evidence sufficient to establish its truth. I do, however, assert that the evidence usually brought forward is inadequate for this purpose, that there is evidence working in the opposite direction, and that a very different view is at least worthy of consideration. And in spite of the prevailing attitude towards Kant, which varies from pitying patronage to petulant rebuke, it seems to me as rash to attribute this extraordinary doctrine to the founder of the critical philosophy, as it is to suppose that his commentators may be mistaken.

It will hardly be denied that the doctrine in question is an extraordinary one. The more we reflect on it, the more extra-

¹ The acceptance of the doctrine is neither so widespread nor so unqualified in Germany as it is in this country.

ordinary does it appear. If it means anything, it means that the forms of judgement as known to formal logic are the forms of analytic judgements, and are *not* the forms of synthetic judgements. We should expect that the forms of judgement would be the forms of all judgements, or the forms of judgement in general, or of thinking in general. This is how Kant himself habitually describes them. For example, just before introducing the Categories,¹ he describes the previous table² of forms as giving us the logical functions (that is, forms) "*in all possible judgments*". This ought to mean that the forms of judgement are the forms *both* of analytic *and* of synthetic judgements, and indeed there would be no point in calling them forms of judgement, unless they were so.

We may well ask how any other view can be considered as even a possible view. To assert that the forms of judgement are not the forms of synthetic judgement is to assert something that is perilously near nonsense—in fact (not to put too fine a point on it) it is nonsense. It means that a synthetic judgement is neither universal nor particular nor singular; that it is neither affirmative nor negative; that it is neither categorical, nor hypothetical, nor disjunctive; and that it is neither problematic, nor assertoric, nor apodeictic. One can only say that if this, or anything like this, is true, no synthetic judgement has ever been, or ever will be, made, and that the very idea of a synthetic judgement becomes as meaningless as the idea of a square circle. If synthetic judgements do not partake of the forms of judgement, they are not judgements at all.

No doubt it is possible that a doctrine which is in itself nonsense may have been held by Immanuel Kant. Nevertheless there is a presumption against attributing nonsense to one who has earned some reputation as a thinker. The presumption will be greatly strengthened, if it can be shown that the rejection of this nonsensical view makes the *Metaphysical Deduction* cease to be the broken-backed thing which it is usually represented to be. This point will be considered later, but even without it we may say that the evidence ought to be carefully scrutinised, and indeed that it ought to be clear beyond all dispute, before we surrender ourselves to the orthodox theory, supported though it be by so many venerable names.

¹ A79 = B105. (The first edition of the *Kritik of Pure Reason* will be referred to throughout as A, the second edition as B. The numbers in brackets refer to the complete Edition of the Prussian Academy.)

² A70 = B95.

II.

The orthodox theory could never have become so firmly established, unless there were evidence, or what looks like evidence, to support it. It is, however, difficult to say what precisely the evidence is, since the commentators accept the doctrine without question, and consequently do not gather together the passages upon which they rely. The arguments in favour of their theory are embedded in discussions which do not face the question directly; they have to be extracted by means of inference. In the writings of Kant himself I am acquainted with one passage only (occurring, however, at a very critical stage in his argument) which may seem to offer direct evidence of the kind required; but there are many statements in his works which can easily be mistaken for such evidence, and which often are so mistaken. It is necessary, even at the risk of tediousness, to touch upon some of these misconceptions. I propose to deal with mere misunderstandings in this section, and to reserve the more serious evidence for the following section.

(1) Kant is no revolutionary in regard to formal logic; many of his statements about it might have come direct from Aristotle; and the weakness of his argument from the modern point of view is that, like his contemporaries and predecessors, he accepted Aristotelian logic as, within its own sphere, complete and final. I do not think any one will maintain that Aristotle regarded the forms of judgement as confined to analytic judgements, but it seems to be believed that in holding this doctrine Kant was, as in other respects, merely continuing an established logical tradition.

What is the evidence for such a belief? It is true that some thinkers regarded analytic (or identical) judgements as the ideal of knowledge, but this has nothing to do with the forms of judgement as such. I have sought in vain for the required doctrine in Leibniz, in Baumgarten, in G. F. Meier, and in Kant's own lectures on logic. Furthermore, in the so-called *Streitschrift gegen Eberhard*¹ Kant appears to resent the statement that Wolff and Baumgarten had made clear the distinction between synthetic and analytic judgements, and to claim novelty for his view in this respect. If there is any truth in this, it is manifest that the exclusive concern of formal logic with the forms of analytic judgements can be no part of the existing logical tradition. On the other hand, if this exclusive concern is an innovation made by Kant himself, it is amazing that he does not refer to it more explicitly.

¹ (VIII., 231).

(2) Transcendental logic, as opposed to formal logic, deals with synthetic *a priori* judgements. It does not follow from this that formal logic deals only with the form of *analytic* judgements, just as it does not follow that formal logic deals only with the form of *empirical* judgements. Formal logic deals with judgement in general, that is it deals with the forms of judgement without regard to the matter. The difference between empirical and *a priori* judgements is a difference of matter only, and these judgements have the same forms. So too, I suggest, synthetic and analytic judgements have the same forms.

No one has yet asserted, so far as I know, that the forms of judgement do not hold of empirical judgements. Yet that is the necessary consequence of the prevailing theory, since analytic judgements (for Kant) are all *a priori*. This in itself seems to me a sufficient refutation of the theory.

(3) Formal logic is for Kant the logic of *discursive* thought. It is easy to misunderstand this statement, and to suppose that if formal logic gives us the forms of discursive thought, it gives us the forms of analytic thought (or judgement), and of that alone.¹

Discursive cognition is cognition through concepts, while intuitive cognition is cognition in intuition. The intuition refers directly or immediately to the object, while the concept refers mediately to the object by means of intuition. *All human thinking is discursive*; that is to say, we do not possess an intuitive understanding or intellectual intuition, which would create its own object in the act of thinking. Apart from what is given to us in intuition by means of sense, human thinking would be without an object, and would be empty. This is a commonplace of the Kantian philosophy.

If we consider cognition or knowledge (*Erkenntnis*) as opposed to mere thinking (*Denken*), we can say that for Kant it always (in human beings) involves both thought and intuition; that is, it involves both a discursive element and an intuitive element. We sometimes, however, describe cognition as discursive or as intuitive, according to the element which is most prominent in it.² Thus mathematical cognitions can be described as intuitive, while philosophical cognitions are described as discursive.³ The reason is that philosophy (even Kant's philosophy) has to work with mere concepts (although always in relation to a possible

¹ Prof. Kemp Smith seems to lend support to this view, e.g., *Commentary*, pp. 176, 182-183, etc.

² *Fortschr. d. Metaph. Beilag. I., Abs. 2. Philosophische Bibliothek*, 46C., p. 156.

³ *Logik* (IX., 23), A719 = B747.

experience), while mathematics can construct *a priori* in intuition objects corresponding to its concepts.

There are no exceptions to this rule, although the Mathematical Principles are said to have intuitive certainty¹ (*Gewissheit*) and evidence (*Evidenz*),² while the Dynamical Principles have discursive certainty. Kant is, however, careful to make clear³ that even the principle of the Axioms of Intuition is itself not an axiom, but is obtained by means of concepts, and so is discursive. His general position is established beyond a shadow of doubt in the Transcendental Doctrine of Method, and may be summed up in his own words: ⁴ "A transcendental proposition is therefore *synthetic* knowledge, through reason, in accordance with mere concepts; and it is *discursive*".

It is a very natural error to equate 'analytic' with 'discursive', and 'synthetic' with 'intuitive', on the ground that analysis works with concepts only, while synthesis demands intuition as well. It is none the less an error. Human cognition is always discursive *from the side of understanding*; ⁵ and every synthetic proposition in Kant's philosophy, including the Analogies of Experience themselves, is quite certainly a *discursive*, and not an intuitive, proposition.

Hence, to say that logic gives the forms of discursive thought is not to say that it gives the forms of analytic judgements only. All human *thought* is discursive; and some human *cognitions* (including the very essence of the transcendental philosophy itself) are both discursive and synthetic. Indeed, I doubt whether any synthetic propositions outside of mathematics are ever described by Kant as intuitive, but it is sufficient for my purpose to show, as I have done, that some discursive propositions are synthetic.

This argument therefore, plausible as it may seem at first sight, necessarily falls to the ground.

(5) Kant is never tired of insisting ⁶ that the supreme principle of formal logic is the principle of *non-contradiction*, and that by the mere rules of logic we can produce nothing but analytic judgements. This doctrine is supposed to reinforce the plausible error which has just been exposed, and is itself taken as implying that formal logic gives us the forms of analytic judgement only.

¹ A162 = B201.

² A180 = B223. Cf. *Log. Ein.*, IX. (IX., 70) where *Evidenz* = intuitive *Gewissheit*.

³ A732-733 = B760-761.

⁴ A722 = B750.

⁵ *Log. Ein.*, VIII. (IX., 58).

⁶ *E.g.*, A150 = B189 ff.

This alleged implication is illusory. If we accept provisionally the distinction between analytic and synthetic judgements,¹ what Kant maintains is obviously true. Supposing that any concept is given to us, we can by the principle of non-contradiction make analytic judgements, but we cannot make synthetic judgements, unless we have also intuition of the object of the concept. Does any man in his senses maintain, as a necessary consequence from this obvious fact, that synthetic judgements must therefore have a different form from analytic judgements, that, for example, they can be neither affirmative nor negative? If, on the other hand, this is not a necessary consequence, there is nothing in Kant's theory here which can justify us in attributing to him such manifest nonsense. We are looking for evidence that this nonsense was part of his philosophical doctrine, and clearly we must look for it elsewhere.

I should myself have thought that Kant's doctrine in this respect works in the opposite direction. It is true that the principle of non-contradiction is the supreme principle of formal logic, and that it is "the universal and completely adequate principle of all analytical cognition."² We can use it positively to determine the truth or falsity of any admittedly analytic judgement. But where does Kant assert that synthetic judgements are not subject to the law of non-contradiction? He says precisely the opposite, and what he says is true. The law of non-contradiction is "a universal, although merely negative, criterion of *all* truth."³ It is a *conditio sine qua non* of *all* knowledge. Synthetic judgements must conform to the principle of non-contradiction, and indeed to all the rules of logic,⁴ and unless they do so they are false; but we cannot tell merely by the rules of logic whether any synthetic judgement is true.

For Kant the principle of non-contradiction and the rules of formal logic govern all knowledge, whether synthetic or analytic. If this suggests anything, it suggests that the forms of judgement which logic studies are not the forms of a particular kind of judgement, but the forms of all judgement without exception.

It is an elementary mistake to suppose that the judgements whose forms are set forth by logic are necessarily identical with the judgements which can be made by the rules of logic alone.

¹ Mr. Joseph's attempt to turn this into another distinction (*Logic*, p. 210) seems to be explicitly rejected by Kant in the *Streitschrift gegen Eberhard* (VIII., 230).

² A151 = B191.

³ A151 = B190.

⁴ Cf. A52 = B76. Formal Logic "contains the absolutely necessary rules of thought, without which no use of the understanding ever takes place".

(6) There is another respect in which an exclusively analytic procedure is connected with formal logic. This is concerned with the production of concepts, and since it is mentioned more than once in the *Metaphysical Deduction* itself,¹ it acquires an importance which it would not otherwise have. The reason why it is mentioned there is to contrast the account given by formal logic of the production of concepts with the account of the categories given by transcendental logic. We are fortunate in having Kant's own lectures on logic which expound the ordinary formal view,² so that there is no excuse for misunderstanding what his doctrine is.

Every concept has (a) matter, and (b) form. Its form is its universality, its matter is its object. Formal logic (as always) ignores the matter, and considers only the form. It explains how concepts are produced, only so far as their *form* is concerned. That is to say, accepting the fact that ideas are given to us, it explains how they can be turned into concepts,³ or how they can be brought under a concept,⁴ or how they can be given that form of universality which is demanded by judgement, and without which they could not apply to different objects. In doing so formal logic ignores the fact that the *matter* of concepts may come from different sources. The matter comes from experience in the case of empirical concepts; it comes from mere invention in the case of fictitious or arbitrary concepts; and it comes from the nature of understanding itself in the case of pure concepts.⁵ The question of the origin of concepts *in regard to their matter* is considered only in metaphysics (that is, in transcendental logic).

Here, again, it is noteworthy that for Kant formal logic considers the form of *all* concepts, and this surely does something to confirm the view that it considers also the forms of *all* judgements.

Nevertheless, the procedure of which formal logic gives an account⁶ is said to be analytic, so it may be well to observe what that procedure is. It consists in comparison, reflexion, and abstraction. I see, for example, a spruce tree, a lime tree, and a willow. I *compare* them, and observe that they differ from one another as regards their stem, their branches, their leaves. I *reflect*, however, on what they have in common,

¹ A76 = B102 ff.

² *Logik. Allg. Elem. Abs.* I., §1-§6 (IX., 91-95).

⁴ A78 = B104.

³ A76 = B102.

⁵ Cf. A84 = B116 ff.

⁶ In A76 = B102 the procedure is (loosely) implied to be the procedure of formal logic itself, and this confusion is too often repeated by the commentators. The more correct statement is found in A78 = B104.

namely stem, branches, and leaves. And I *abstract* from their size, shape, and so on. In this way I attain to the concept of 'tree'.

It is a far cry from this elementary exposition to the view that the forms of judgement are not forms of synthetic judgement.

(7) Formal logic is analytic in the sense that it analyses ¹ (*auflost*) the whole formal procedure of understanding and reason into its elements. It is on this ground that the main part of it has, since the time of Aristotle, been called the Analytic (or Analytics). Transcendental logic has, however, also its Analytic, which is the analysis ² (*Zergliederung*) of all our *a priori* knowledge into its elements, and indeed the analysis ³ (*Zergliederung*) of the power of understanding itself with a view to the discovery of the categories.

This kind of analysis has no connexion with the problem which is being discussed.

III.

Kant's doctrines in regard to formal logic have now been reviewed in so far as they indicate a connexion between formal logic and any kind of analysis. It seems to me that in them there is no evidence whatever for the accepted doctrine that the forms of judgement, as given by logic, are not forms of synthetic, as well as of analytic, judgement. There is, however, much that might be (and often is) mistaken for such evidence. In particular, the fact that the thinking with which logic deals is termed discursive, may easily lead the unwary to believe that logic gives the forms of analytic judgement only. The mistake is made still more easy by another fact, namely that the principle of non-contradiction is a *sufficient* criterion of the truth of analytic judgements only, and that the only judgements which can be made by means of the rules of logic alone are analytic judgements.

Hence it is not surprising that this error (as I take it to be) should become firmly established, once it had been set forth by a competent commentator. That it should be so set forth was the natural result of the one passage which offers what looks like direct evidence in its support.

This one passage occurs in the heart of the paragraph ⁴ which is the very core and crux of the Metaphysical Deduction itself. Unfortunately, this paragraph is perhaps the most difficult in the whole body of Kant's writings, and its general meaning must

¹ A60 = B84.

² A64 = B89.

³ A65 = B90.

⁴ A79 = B104-105.

be considered in order to understand the particular passage with which we are concerned.

The paragraph consists of two sentences, both full of difficulty. Each throws light on the other, but we must concentrate on the second sentence, which contains the evidence of which we are in quest.

The same understanding, Kant asserts, and by means of precisely the same activities, does two things: (1) in concepts, by means of the analytic unity, it brings into existence the logical form of a judgement; (2) it brings into its ideas a transcendental content by means of the synthetic unity of the manifold in intuition in general. The transcendental content, needless to say, is the category.

The activities of which Kant speaks must be the activities of judging. All the activities of understanding can be reduced to judging.¹ If we are to have that *unity* of the manifold of intuition without which there can be no knowledge and no object, there must be judgement present as well as intuition; and if judgement (with its form) is present to unite the manifold of intuition, there is thereby introduced a category into our ideas: to this category all objects must necessarily conform.² That is the second statement which Kant makes about understanding and its activities, and this statement is the essence of the *Metaphysical Deduction*.

At present, however, we are concerned with the first statement. The other thing which understanding does by the activity of judging is, in the case of concepts, to produce the form of a judgement *by means of the analytic unity*.

This asserts (what we know already) that if we have concepts given to us, we can by mere analysis make judgements, and so bring into existence the form of a judgement. The given concepts are the matter of the judgement, the determination of the way in which they are united is the form.³ The form of judgement is undoubtedly to be found in analytic judgements, but is there anything in the present statement to imply that it is not found in synthetic judgements?

I do not see that the statement would justify us in attributing such a view to Kant with any confidence, even if it were a reasonable view. Still less do I think it justifies us in attributing to him a view which is on examination preposterous. I believe, on

¹ A69 = B94.

² A concept (it is hardly necessary to say) is called a category, only if all objects must conform to it.

³ *Logik. Allg. Elem. Abs.* 2, § 18 (IX., 101).

the contrary, that the whole Metaphysical Deduction turns on the fact that the same form is to be found both in analytic and in synthetic judgements, and this belief is, I suggest, confirmed by the immediately preceding sentence.

Throughout the Metaphysical Deduction the word 'form' is equated with the word 'function'.¹ The forms of judgement and the functions of judgement are one and the same thing. Their connotation may be different, but their denotation is the same. In view of this the previous sentence becomes illuminating. "The same function (that is, the same form) which gives unity to the different ideas *in a judgement*, also gives unity to the mere synthesis of different ideas *in an intuition*." The reason for this is the obvious one that there is no unity in an intuition apart from judgement, and apart from the form (or function) of judgement. The statement is meaningless unless the forms of judgement in general are also the forms of synthetic judgement, for the latter alone directly involves intuition.

This view of the Metaphysical Deduction is, I believe, borne out and emphasised in the second edition of the *Kritik*, in the *Prolegomena*, and in the *Metaphysische Anfangsgründe der Naturwissenschaft*. These later expositions will be examined in the following section. What we have to consider at the moment is why in this passage Kant should emphasise the fact that the form of judgement is to be found in analytic judgements.

So far as I can judge, the reason would seem to be that if we wish to be certain of grasping the form of judgement, apart from any possibility of its being determined by the matter, we turn to the analytic judgement. Whatever be the matter given to us in concepts we can, according to Kant, always make analytic judgements; whereas synthetic judgements depend upon something more, namely the presence of an intuition corresponding to the concept. Synthetic propositions increase knowledge *materialiter*, while analytic propositions do so only *formaliter*.² Hence there is a specially close connexion between the forms of judgement and the analytic judgement, inasmuch as an analytic judgement makes only a formal difference to our knowledge. An analytic judgement can be made by a merely formal use of reason, but a synthetic judgement cannot be so made.

To say this is to admit that there is in Kant's thought and language something that gives colour to the interpretation which we deny. Unless something of this kind could be discovered, the probability would be that the interpretation in question rested

¹ 'Function' seems to mean the form of an activity (e.g. judgement), while 'form' may be the form of a receptivity (e.g. sensibility).

² *Logik. Allg. Elem. Abs.* 2, § 36 (IX., 111).

on evidence which had been overlooked. Nevertheless, the evidence that we have discovered is very far from justifying the statement, in its naked horror, that for Kant the forms of judgement can never be the forms of synthetic judgements. The difference between analytic and synthetic judgements is not in respect of form. It lies in the fact that the whole matter of the analytic judgement is given in the subject concept, while the synthetic judgement requires an additional matter given by direct intuition.

Another possible reason for Kant's statement is that by analysis of a concept we may produce a form of judgement, which is *only* a form; that is, which has no object, no matter given to sense. Many metaphysical judgements are (according to Kant) of this nature. I do not think, however, that all analytic judgements are regarded by Kant as mere forms without matter. Furthermore, although analytic judgements take place by means of concepts only, they are, I think, intended to be about objects, and not about concepts.¹

The precise point of Kant's assertion may be doubtful. None the less, one fact is clear. The assertion, even the emphatic assertion, that the form of judgement is present in analytic judgements, is not equivalent to the denial that it is present in synthetic judgements.

Hence the second sentence in this crucial paragraph does not deny that the same form is present in analytic and synthetic judgements. The first sentence seems to me to assert, or at any rate to imply, the presence of the same form in both types of judgement, and I believe it is on this identity that the whole Metaphysical Deduction depends.

IV.

Kant asserts that it is the *same function* (that is, form of judgement) which gives unity (1) to ideas in a judgement, and (2) to the synthesis of ideas in an intuition. He asserts also that it is the same *understanding*, by means of the *same activities* (that is, the activities of judging), which (1) produces the logical forms of judgement in dealing with concepts, and (2) introduces the categories into our ideas. The common interpretation of this—at any rate in this country—is that Kant does not mean what he says. He is asserting an *identity*, but this is watered down by the commentators to an *analogy*, on the ground that there is no

¹ Hermann Cohen, supported by Kinkel, takes the opposite view.

identity between analytic and synthetic judgements. It is then observed that there is also no analogy between analytic and synthetic judgements, and so Kant is rebuked on the ground that there is no such analogy, or else defended on the irrelevant ground that analysis presupposes synthesis. He is, in short, either rebuked or defended for something which he has never said.

All this confusion arises from the belief that the forms of judgement are not the forms of synthetic judgement. Set aside this error, and it at once becomes clear that Kant has every right to assert an *identity* between analytic and synthetic judgements. Analytic and synthetic judgements are identical *in respect of their form*. The whole metaphysical deduction of the categories turns on the fact that *all* judgements (whether analytic or synthetic) have the *same* form. This is, I believe, what Kant is trying to say in the passage under consideration.

Kant's argument here is, however, too brief to be wholly clear. We must look for confirmation elsewhere, and of this there is no lack.

(1) In the *Prolegomena*, Kant gives us a summary¹ of the deduction. To think, he says, is to unify (*vereinigen*) ideas in one consciousness. This unification (*Vereinigung*) of ideas in one consciousness is judgement. The logical moments (that is, forms) of *all* judgements are so many ways of uniting (*vereinigen*) ideas in one consciousness. When these logical moments (or forms) serve as concepts (that is, as categories), they are concepts of the necessary unification (*Vereinigung*) of ideas in one consciousness. *This unification (Vereinigung)*, he adds, *is either analytic (through identity) or synthetic (through the adding of one idea to another)*.

In this passage Kant recognises explicitly that in all judgements, *whether analytic or synthetic*, there is present an act of unifying ideas, and that the forms of judgement are the forms of this unification. It is because the *same* forms of judgement, or of unification, are present in *all* judgements, that the manifold of sense (which must be *judged* if we are to have an *object*) is necessarily subject to the categories. For the category is "a concept of that synthetic unity of intuitions which can be represented only through a given logical function (that is, form) of judgement".²

How could a form of judgement represent synthetic unity of intuitions, if it were not the form of synthetic judgement as well

¹ *Prol.*, § 22 (IV., 304-305).

² *Prol.*, § 21a (IV., 304).

as of analytic? The forms of judgement are forms of a unification which may be either analytic or synthetic. What can this mean, unless it means that the forms of judgement are forms of both analytic and synthetic judgements?

(2) There is another Deduction of the categories in the preface to the *Metaphysische Anfangsgründe der Naturwissenschaft*. There¹ Kant asserts that "the categories are simply the forms of judgement, so far as these forms are applied to sensible intuitions". It is by being so applied that these forms first acquire objects and become cognitions. How could these forms be applied to sensible intuitions, unless they were forms of synthetic as well as of analytic judgements?

The example which Kant gives to illustrate the form of a categorical judgement is "The stone is hard". Will any one deny that this is a synthetic judgement?

(3) In the second edition of the *Kritik* Kant is as explicit as he is in the *Prolegomena*. The word 'combination' (*Verbindung*) here takes the place of 'unification' (*Vereinigung*). All combination is the work of the understanding² and not of sense, and it is so, be it noted, whether what is combined is the manifold of intuition or *concepts*. The reference to concepts suggests pretty obviously that this act of combination is present even in analytic judgements. To this act of combination Kant gives the general name of 'synthesis'. This combination is the one thing which is not given by the object, but is an act of the spontaneous understanding. It is the condition of analysis, because apart from it we should have nothing to analyse.

This 'combination' is defined as 'representation of the synthetic unity of the manifold', and in a note³ Kant calls attention to the fact that it is present *in analytic as well as in synthetic judgements*. "Whether the ideas—that is, the ideas combined by understanding in judgement—are themselves identical, so that one can be thought analytically through the other, is here irrelevant. The *consciousness* of the one (so far as the manifold is in question) is always to be distinguished from the consciousness of the other, and what is relevant here is only the synthesis of this (possible) consciousness."

It is interesting to observe that there is a sense in which synthesis is for Kant the common element of all judgements. This is too often forgotten to-day, but is familiar to a contemporary commentator like Mellin who can say,⁴ "Every judgement is a

¹ (IV., 474-476).

² B130.

³ B131.

⁴ *Encyclopädisches Wörterbuch d. Krit. Phil.*, III., 519.

synthesis". This throws a flood of light on Kant's argument, and explains how forms which belong to analytic (as well as to synthetic) judgements can be the clue to the categories which are principles of synthesis. Our concern with it here is, however, only that it involves the assertion of that identical element in all judgements which the commentators habitually condemn Kant for failing to comprehend.

It is from this point that Kant goes on to say ¹ that in the logical functions (forms) of judgement combination, that is, unity of given concepts, is already thought. It is, he adds, because the categories are grounded on these logical forms that they presuppose combination.

The combination, which is here presupposed by the categories and *thought in the forms of judgement*, is, as we have seen, present in analytic judgements. Will any one deny in this context (or in any context) that it is present also in synthetic judgements?

(4) The essence of the Deduction in the second edition is, however, to be found in § 20,² and it fully and explicitly affirms the doctrine we have found in the first edition. All the manifold of given intuition must fall under the unity of apperception, for only so can it itself have *unity*. The activity of the understanding which brings the manifold under the unity of apperception is the *logical function*³ (or *form*) of the judgement—this is true whether our ideas of the manifold happen to be intuitions or concepts.⁴ Therefore the manifold of intuition (so far as it is given in *one* empirical intuition) is determined in respect of one of the logical functions (or forms) of judgement, which alone can bring it under the unity of apperception. The categories, however, are simply these *forms of judgement*, so far as these forms determine the given manifold.⁵ Therefore the given manifold, if it is to have unity (and so to be an object), must necessarily fall under the categories.

Here again the argument has no meaning unless the forms of judgement are also the forms of synthetic judgement, for it is in synthetic judgement that the forms of judgement determine the manifold of given intuition, while in analytic judgements they are

¹ B131.

² B143.

³ There is a looseness of terminology here, because the function (strictly speaking) is the unity of the activity (A68 = B93), Kant seems to use "function" to mean also "the activity as a unity".

⁴ The reference to "intuitions or concepts" again suggests that the difference between analytic and synthetic judgements is irrelevant—the form being the same in both cases.

⁵ Cf. B128.

(sometimes at least) concerned with mere concepts. There is no word in this, nor so far as I know anywhere else in Kant, of an *analogy*. What we require is an *identity*, and that is precisely what we are offered.

(5) There is yet another deduction of the categories in Kant's uncompleted work on the Progress of Metaphysics since Leibniz and Wolff, commonly called '*Die Akademische Preisschrift*'. In it 'composition' (*Zusammensetzung*) takes the place of '*Vereinigung*' in the *Prolegomena*, and '*Verbindung*' in the second edition of the *Kritik*. In this case also 'composition' is equated with 'synthesis', and the categories are once more asserted to be the forms of judgement,¹ 'but only in so far as the forms of judgement represent *a priori* the synthetic unity of the apperception of the manifold given in an intuition in general'.

Furthermore, the understanding is said to show its power in judgements, and judgements are said to be the unity of consciousness in regard to concepts in general, "it being undetermined whether that unity is analytic or synthetic".

All this is the doctrine with which we are familiar, and it has no meaning unless the forms of judgement are forms of synthetic, as well as of analytic, judgement.

(6) The following facts emerge from a study of the later expositions of the Deduction:—

1. The Transcendental Deduction as a whole depends upon the Metaphysical Deduction, that is, upon the identification of the categories with the forms of judgement, *as applying to and uniting the manifold given to sense*.

2. This is meaningless, unless the forms of judgement are also forms of synthetic judgements.

3. Every judgement as such (whether analytic or synthetic) is an act of unification or combination or composition or synthesis.

4. The forms of judgement are forms of this unification or synthesis which is present in all judgements (whether analytic or synthetic).

5. It is for this reason that the forms of judgement can be regarded as principles of synthesis.

6. For the same reason, the forms of judgement must be forms both of analytic, and of synthetic, judgements.

These facts are in complete accordance with the interpretation which I have given of the Metaphysical Deduction in the first edition, and therefore confirm that interpretation. It is no

¹ *Abt. 1. Von Begriffen a priori. Philosophische Bibliothek, 46C., 96-98.*

doubt possible that in the interval between the two editions Kant's views had entirely altered, but this is explicitly denied by him in the preface to the second edition,¹ and is implicitly denied by his retention of the Metaphysical Deduction in its original form, even when the rest of the Transcendental Deduction was rewritten.

This interpretation is, I submit, the key, not only to the Metaphysical Deduction, but to the Transcendental Deduction as a whole.

V.

The Metaphysical Deduction of the categories derives all the plausibility it has from the principle that the forms of judgement are the same in all judgements (whether analytic or synthetic). This principle is true in itself (can any one deny it, once the issue is clearly put?), and the weight of the evidence goes to show that it was Kant's explicit doctrine.

Consider what Kant's problem was. He believed that if the reality to be known consisted of separate things-in-themselves, which are what they are independently of the mind that knows them, then while we might have empirical knowledge of them, we could have no *a priori* knowledge of them; we could never say what they all must be, but only that, so far as we had experienced them, they had certain characteristics. For this view there is much to be said.

Kant, however, does not doubt that we have *a priori* knowledge in mathematics, and also in the ultimate principles of physical science, such as that every event must have a cause. He therefore adopts as a hypothesis the view that the *a priori* elements in knowledge must be due, not to the nature of the reality known, but to the nature of the knowing mind. This is the Copernican revolution, by which he supposes that something in the objects *as known* is due to the mind, just as Copernicus supposed that something in the motion of the stars *as observed* is due to the motion of the observer.

This hypothesis is obviously worthy of consideration, and if it should solve otherwise insoluble problems (as Kant holds it does), it would be worthy of adoption.

After much reflexion² Kant was able to separate off space and time, as forms of sensibility, from the categories, or pure concepts of the understanding. If it be granted (1) that we have *a priori*

¹ Bxxxvii ff.

² *Prol.*, § 39 (IV., 323).

knowledge of space and time, and (2) that what can be known *a priori* must be due to mind and not to things, it seems reasonable to say that space and time are due to the nature of our sensibility (rather than to the nature of our power of thinking).

We are then left with the problem of the categories, especially the category of substance and the category of cause. These are not seen, or sensed, or necessarily involved in all sensation, as are space and time. We can *see* that a body occupies space and lasts through time. We cannot *see* that it is a substance or a cause, we only *think* that it is.

If the categories necessarily apply to all objects, they are (on the Copernican theory) due to the nature of the knowing mind. As they are not bound up with our sensibility, they must be bound up with our understanding; for sensibility and understanding are the only two ways we have of knowing. As understanding is active, while sense is passive, we must look for the categories in the *activity* of understanding, that is, in what understanding does to any and every object which it knows. As there are different categories, we must find one activity which manifests itself (independently of the differences in objects) in different ways. So only shall we be able to have an intelligible list of the categories as a system.

All this (as an attempt to formulate the Copernican hypothesis) is most reasonable, and indeed inevitable, if we admit that thought is active and sense is passive.

At first Kant seems to have considered whether the categories could be connected with the activity of thought in 'comparing, combining, and separating'.¹ But he became aware that the one activity of understanding which contained all the rest, and differentiated itself into different forms in order, be it noted, to bring the manifold of ideas under the unity of thought—was judgement.²

Here again Kant's thinking was perfectly straightforward and (if we grant his presuppositions) sound. We cannot know anything by means of mere sense, we must have conception as well. If, for example, we are to know a house, it is not enough to have a series of isolated sensations. We must unify our sensations under the concept of house, and to do so is to judge. Without judgement there is no knowledge, and no object of knowledge; there is only a series of sensations.

We can therefore say *a priori* that every object, to be an object,

¹ *Reflexionen*, ii., 513.

² *Prol.*, § 39 (IV., 323). Cf. A69 = B94, 'All activities of understanding can be reduced to judgement'.

must be such that it is capable, not only of being sensed, but of being judged.

It was no foolish pedantry or natural muddleheadedness that made Kant proceed to seek for the categories in the forms of judgement. He was looking for something in judgement which was not determined by the object or by the matter judged, something which was contributed by the mind out of its own nature. The doctrine of Aristotelian logic was that the forms of judgement were so contributed by the mind, that these forms were the basis of all inference, and held good for any and every possible matter that could be judged. Hence if an object, to be an object, must be capable of being judged, it must also be capable of conforming to all the forms of judgement, for these are necessary forms belonging to the nature of judgement itself, altogether irrespective of the matter judged.

This doctrine had held unquestioned sway over the minds of men for more than two thousand years. It was the one principle of philosophy which no man doubted. It stood on the same level of certainty as the propositions of Euclid or the principles of arithmetic. It was more venerable than the Catholic Church. What wonder if Kant decided that to found his philosophy on this was to found it upon a rock?

He could not know that the floods of modern thought were to undermine and overwhelm the rock upon which he built, that the philosophical logicians would try to make the forms of judgement fluid, and the mathematical logicians would attempt to make them infinite in number.¹ I do not believe that for this he is to be blamed, for one man cannot do all the thinking of the human race.

The Aristotelian doctrine is not in itself an unreasonable doctrine—indeed if it had been, it could not have dominated men's minds so long—and it clearly implies that every object to be an object *must* conform to all the forms of judgement. It does so, however, on one supposition, and *on one supposition alone*,—that the forms of judgement are forms of those synthetic judgements by which (primarily if not solely) objects are determined, as well as of those analytic judgements which, in clarifying our concepts, may have no reference to an object at all. Personally, I do not believe that any other possibility ever crossed, or ought to have crossed, Kant's mind.

Once we accept the Aristotelian logic, and realise that the (unschematised) categories are simply the forms of judgement as

¹ *A Modern Introduction to Logic.* Stebbing, p. 45.

determining an object given in intuition in general, Kant's conclusion—that the categories are necessary concepts of an object in general (whatever be its given matter)—is an inevitable conclusion.

It must, of course, be remembered that for Kant the categories are not innate ideas, but ways in which the mind must judge, or ways in which thought must unite the manifold of sense in one consciousness, or again ways in which all objects of thought must be united. Furthermore, there are many other difficulties still to be faced. The question of *how* the categories can apply to objects is considered in the Subjective Deduction. The question of the connexion between the pure categories (as forms of objective judgement) and the schematised categories (which involve time) has to be dealt with in the chapter on Schematism. And the principles founded upon the categories still require to have each its separate proof.

The main work has, however, been done, and I venture to say that it has been done well. It is commonly asserted that the table of judgements has been doctored by Kant for his own ends. If this is true at all, it is, at the least, grossly exaggerated. A glance at the first sentence in Chap. VIII. of Mr. Joseph's *Logic*¹ will show that the list of forms which has "for long been commonly accepted" is identical with the list given by Kant with one exception—the so-called infinite judgement: and even that has a respectable pedigree, going back as far as Aristotle himself.

VI.

I venture in conclusion to make certain assertions:—

(1) If we put ourselves at the point of view of formal logic, the forms of judgement are the forms of *all* judgement.

(2) If we distinguish between analytic and synthetic judgements, precisely the same forms are to be found in both. To deny this is nonsense.

(3) To attribute this nonsense to Kant can be justified only by overwhelming evidence.

(4) There is in the evidence examined nothing to compel such attribution, although there is a great deal to suggest that the orthodox view is a natural misunderstanding.

(5) There is much in the evidence directly contrary to such attribution.

¹ P. 171.

(6) If we accept formal logic and Kant's presuppositions, the Metaphysical Deduction (so far as it goes) is reasonable and even necessary—provided we suppose that the *same* form is present in analytic and in synthetic judgements.

(7) If we make Kant start from the nonsensical view, the Metaphysical Deduction becomes feeble in the extreme, and is not even alleged to be plausible by those who insist on interpreting it in this way.

(8) The orthodox view is erroneous, or at least it rests upon evidence which I have been unable to find. The case against it is sufficiently strong to justify us in asking that the evidence should be produced.

V.—DISCUSSIONS.

MR. RYLE ON PROPOSITIONS.

REJOINDER.

IN the January number of *MIND*, 1931 (N.S., No. 157), Mr. Robinson discusses certain views put forward by me before the Aristotelian Society in February, 1930, on the subject of propositions. He accepts my conclusion that there are not objective propositions but quarrels with some of the arguments that I used and urges other arguments as ones which I ought to have used.

Some of the things which he says seem to me true and important; but about certain crucial parts of the problem he does not in my view say half enough.

On one or two small points he is a little hard on me. For instance, in his first paragraph he argues a little oddly that I do 'not wholly succeed in showing us why we ever wanted to think there were [propositions]'. And this failure of mine is due to the fact that I did not, according to him, succeed in refuting some of the arguments in favour of propositions, and because I fail in my own solution of . . . 'the main problem which the theory [of propositions] aimed at solving'. It does puzzle me that an exposition of the reasons and motives which have led people into accepting a view about a problem is bound to be inadequate as an exposition unless it contains a proof of the invalidity of those reasons and the wrongness of those motives, as well as a solution of the problem itself.

But it does not matter. For clearly it was my business to show why the proposition-theory is mistaken and I may easily have failed to do this or to do it as well as it should be done. And clearly too, it was my business to solve the problem, and if I have failed, it is immaterial whether or not the failure infects my exposition of the origins of the mistaken theory.

In his second paragraph Mr. Robinson asserts that I have not answered my own question and goes on later to show why I could not answer it, namely, because the problem is a false problem. He puts the problem "more directly than" I did in his sentence "If propositions do not exist, what is the object of the thinking that is not knowledge?" and argues that there can be no answer since there can be no such object. So the question does not arise. But I did not, as a matter of fact, say (and I don't think that I suggested)

that this is the right way of stating the problem, and I feel no sense of guilt for putting a false question when the question is one put *for* me and not *by* me. The passages on pages 118 and 122 of my paper to which he refers as containing, indirectly put, what he puts directly in his formulation don't really support him. In the first I am asking, in effect, what does a statement's meaning consist of when the statement is not or is not known to be a statement of fact.

Now this is a proper question, for there is some sense in which statements not known to be true are known not to be meaningless. For they can be understood. And Mr. Robinson at the end of his own discussion himself deals with just this question—though his treatment seems to me to be a very queer one. In the second passage I am asking '*What* am I thinking when I am thinking of X as being Y'. Mr. Robinson does not so far quarrel with ordinary linguistic usage as to assert that there never could be an answer to the question 'What do you think?' (though on his showing he ought to quarrel with this usage). Indeed, at the bottom of page 75 in his article he actually speaks of the 'content of all forms of consciousness'. But, if I may not speak (as in fact I do not) of the object of the thinking that is not knowing, is he entitled to speak of the 'content of all forms of consciousness'? Anyhow on this point I don't think I was seriously compromising myself when I put the question '*what* am I thinking when, etc.'?

But these are probably debating points.

With the general line of Mr. Robinson's analysis and criticism of the doctrine of intentionality I am in complete agreement. I do think that the only sense in which an act of consciousness, which is not knowing, has an object is that it *contains* knowing; and its object is just the object of that knowing. Perhaps mistakenly I did not try to give a general argument for this position; but I did attempt to show that this is the way and the only way in which thinking acts, other than knowing, can be properly described as 'having objects'. For I was trying to show that in believing that X is Y or in thinking of X as being Y, there is an object of the thinking only in the sense that the thinking contains knowing, which knowing is, however, of an object of a special sort.

I argued that in all ways of thinking that X is Y, which are not knowing (namely, believing, opining, supposing, etc.), there is the common factor of thinking of X as being Y; and that this 'thinking of X as Y', while it contains, does not consist merely of, forming an image of X or making a statement about it. It consists in knowing what *would* be the case with X (*i.e.*, that it would be Y) if it had the character that I picture it or state it to have. In a word it consists in understanding the images or words in which I think of X. And understanding is knowing, of which the object is not just the symbols, *e.g.*, in which I think, nor just the thing X of which I am thinking, but a fact about the two.

Now this account may very well be false. It is certainly not

plausible. But I must insist that there really is something to account for. And I ask accordingly, does Mr. Robinson's doctrine really give us what we want and can properly demand?

He only allows that opinions, beliefs, etc., have objects in so far as they embody knowledge which is of objects. So far so good. But, when we examine the instances he gives, we are put off with some very inadequate suggestions. I opine, to take his case, that Greek will be forgotten. "There is", he says, "no object corresponding to the statement 'Greek will be forgotten'." On the other hand I cannot have this opinion without knowing of the existence of Greek and of the possibility¹ of its being forgotten and so on.

But, if this is all, there can be no difference between the opinion that Greek will be forgotten and the opinion that Greek will not be forgotten. For there is nothing that is known, in the one that is not known in the other; and there is no further 'object of opinion' in respect of which the one opinion can differ from the other. So opinions cannot be contradictory, and in matters of opinion men cannot disagree. Nor do I see quite how for him an opinion can be false. For the only things which can be properly described as 'its objects' are known realities and surely they cannot be false.

Mr. Robinson does not to my mind deal squarely with this issue, which is one of the major issues that I tried to face. Indeed, he suggests that failure necessarily attends all attempts to deal with this issue. For there is no such issue.

Is Mr. Robinson adopting Nelson's technique with the telescope?

Let me put the issue again. Mr. Robinson tells us on page 75 (lines 18-22) that 'whereas in knowledge we must distinguish between the object known, the knowing it and the statement or image in which it is known, in opinion [on the other hand] and other states of mind, the first of these falls away, and we have only the opining and the statement or image in which it takes place'. Of course he has already made it clear that opining and other states of mind *contain* knowledge but naturally they cannot be reduced to it.

Take now this case. A and B believe and C opines that Bristol is bigger than London; D believes and E opines that London is bigger than Bristol.

Now all must have knowledge of several things, namely the existence of Bristol and London, their difference, the possibility of one being bigger than the other and so on. I ask Mr. Robinson to tell us these further things: (a) in what respect are A, B, and C in agreement with each other and in disagreement from D and E? (b) What makes A's belief one belief and not several beliefs, corresponding to the several bits of knowledge contained in the believing? (c) Why does D use the same statement to express his belief as I, say, use to express knowledge? And (d) if A comes to believe that London is bigger than Bristol, in what respect has he changed his mind?

¹ I should like to hear in what sense Mr. Robinson thinks that possibilities are realities, such that they can be objects of knowledge.

I have tried, in my account of 'thinking of . . . as . . .', to answer these questions. But ought Mr. Robinson not to admit that even if my answer is wrong, *some* answer is required?

Parallel difficulties arise in Mr. Robinson's account of what is stated by statements which are not true or are not known to be true. I will come to this point after dealing briefly with some minor points that arise in Mr. Robinson's detailed criticisms.

1. On this point I do not think that we really differ, save that I would not willingly speak of 'the content of all forms of consciousness'. Unless he means something peculiar by this phrase, he is selling his fort to the holders of the proposition theory.

2. I agree that the argument that I expound is invalid and possibly puerile. But its puerility has not always been obvious to philosophers, and many of them have, I think, been influenced by some form or other of it. 'Either make everything subjective or else allow that even *δοξαορά* are objective'. However staunch a Cook-Wilsonian one is, one should be sympathetic enough to allow that some arguments have had weight with quite respectable thinkers although they implied that knowing is *not* generically different from other forms of consciousness.

3. Here Mr. Robinson seems to me to concede too much to the proposition theory. For he seems to be allowing that the objects of mathematics are all true, and that universal laws are true and that they have a mode of being which is not that of material things or of minds. So his position seems to be 'There aren't any objective propositions. Oh yes, there are. There are some true ones. But there aren't any false ones.' But I don't really believe that Mr. Robinson does mean this.

4. I have no quarrel with Mr. Robinson on this point. On the contrary I think he has sorted out the several strands in the sort of argument that I represented with an enviable clarity. At the end of my paper I did, I think, commit myself to a view about what it is that can be called true or false which squares with what he says. For I urged that in strictness only such things as statements are true and false; and a statement is true when it states what is the case.

5. On the question of the meaning of statements Mr. Robinson gets himself into real difficulties. We agree on the point that, when a statement states a fact, that fact and nothing else is what the statement means. But what is that which a false statement means?

When Mr. Robinson replied 'the fact that it would state if, being the same statement, it were nevertheless true', I thought at first that he was accepting my position though in unguarded language. For the trouble is that, if the statement is false, there is no fact of which it can be said 'this fact is the meaning of that statement', or 'this fact would in such and such conditions be its meaning'. If a man is a bachelor, I cannot say 'that man's wife is the lady to

whom he would have been married, had he married her'. For there is no lady who can be described as his wife. And if Sairey Gamp's words 'Mrs. Harris' are not anyone's name, I cannot say 'the person who possesses that name is the lady who would have been so named had she only had the grace to exist'.

Mr. Robinson actually goes on to say 'Every statement means a fact . . . but only in the case of true statements does the fact meant exist'.

But this is surely wrong-headed. I state 'Bristol is bigger than London'. My statement then means the fact of Bristol being bigger than London. 'Oh, but it is only an unreal or non-existent fact'. Then it both is and is not a fact that Bristol is bigger than London. Could there be a more patent contradiction than to speak of facts which do not exist as distinguished from facts which do? I shall expect to go for rides in unreal motor cars and visit non-existent villages before I can swallow statements which really mean facts, only ones which labour under the handicap of being unreal.

My answer is a simpler one. It is this. We 'make sense' of a false statement or statement not known to be true by recognising (= knowing) that so and so *would* make it true; and *if* so and so was the case, the statement *would* state a fact. And we can know this because we know the sorts of facts that there are and the sorts of statements that there are and what sorts of statements are statements of what sorts of facts.

So that barely understanding a statement does not consist in knowing of a given fact that it is what is stated by the given statement, but in knowing of the statement that if something were the case it would state a fact.

This dispenses with propositions (and objective sentence-meanings) and with unreal facts.

6. I agree with this, with the qualification that, whatever words are intended to represent, they do not in fact always represent realities, and yet we can understand or make sense of them. What this involves I have just explained.

In general I believe that Mr. Robinson and I agree on most of the questions of principle involved, but I have tried to make a special application of those principles to the various sorts of 'thinking that' which are inferior to knowledge. Mr. Robinson seems to think that no such application is required, and it is really only on this point that I have been trying to show that he is wrong.

G. RYLE.

THE CONCEPT OF PURPOSE IN BIOLOGY.

By the late EUGENIO RIGNANO.

ARISTOTLE'S definition of purpose is well known. The purpose is that towards which action is directed; it must therefore exist as a notion before action begins.

This definition which is evidently limited to the conscious acts of man, in other words to a very restricted category of the purposive manifestations of life, has been and still is the principal reason why many biologists are unwilling to admit any kind of teleology in vital processes in general. It seems to them that to accept it would be to fall into the most out-of-date anthropomorphism; to compare artificially and violently facts so fundamentally different as are, in their opinion, biological and physiological processes on the one hand, and conscious psychical facts on the other.

It is now at last possible to define Finalism in such a way as to remove from the definition every suspicion of anthropomorphism and at the same time to include in it all living processes; which may be consequently called finalist without there being any fear of our arriving at a false, anthropomorphic view, or at any artificial comparison of facts which are essentially different from one another. The main point is that this definition should include, as a particular case, the conscious acts of man, which alone fall under Aristotle's restricted definition.

With the object of discovering this more extended definition, let us consider a few of the most fundamental manifestations of life which are commonly called finalist; for example the ontogenetic process, *viz.*, the development of the embryo. What do we see? This fact of very great importance; that, even if the external circumstances under which the development of the fertilised ovum begins, are profoundly and essentially modified (for example, by the reversal of the position of the ovum or the compression between two plates of the first blastomeres into which it divides, so that they all spread out into a flat layer, but when the plate is taken away, collect together again in another arrangement; or even when we kill or remove some of these blastomeres, or isolate some from others) —even when this is done, we always obtain, with many species, exactly the same form of the developed organism, as if these profound changes in the circumstances of development had not been made. In the course of development, particularly in the early stage, we can remove the limbs just beginning to form, we can take away certain organs in process of formation, we can even cut away the

first beginnings of the head : in spite of all this, the fully developed organism will be just as complete as if it had developed under normal conditions.

But we may also consider the phenomena of regeneration in the adult organism. A change in external conditions so drastic as to result in the amputation or the loss of a certain member or organ, causes in many cases reactive processes to take place of such a kind as fully to restore the organism to its original form. In many cases, the processes serving to re-form the amputated organ (for example, the eye lens of the Triton or the anterior part of the alimentary canal of *Tubifex rivolorum*) are completely different from the processes which brought about the first formation of the organ, and even proceed from tissues of different embryological origin : organs or tissues of ectodermic origin regenerate themselves from tissues of endo- or mesodermic origin, and *vice versa*. In cases of regeneration by "regression" (*Rückbildung*) or "renewal by differentiation", (*Umdifferenzierung*), the part remaining after the amputation of an important part of the organism loses the histological differentiation which it already has, falls back again into the state of a mass of undifferentiated cells, and once more takes up the process of forming the new organism, reproducing it in a form identical with the original. In all these cases, therefore, we see that, when external circumstances change for an organism, the reaction processes produced by the change of circumstances also change, *but that the final result of these processes, however different they may be as compared with one another, always remains the same.*

When we pass from the biological processes of generation and regeneration to physiological processes properly so-called, we see that the adult organism remains unaltered for months and years, even under the continual action of constantly changing physico-chemical environmental conditions, which, on the other hand, continually alter inorganic bodies exposed to the same conditions. When, for example, the man from the plains is transferred to a high mountain climate, or when a man accustomed to fresh air is forced to remain for many hours in a closed space heavily charged with carbonic acid, we find that the neuro-muscular processes of respiration are changed, but the final result of these processes remains that to which the original processes led, namely, the maintenance in the blood of the same quantity of oxygen as before. If any organism is infected at one time with one bacillus, at another time with another, each of which secretes a different specific toxin, the organism produces in the one case a certain anti-toxin, in the other a different anti-toxin : but the result of the two different series of phenomena by which the organism reacts to each of the infections by neutralising the respective toxins, is identical in the two cases, and is the re-establishment of the normal physiological condition of the healthy organism as it was before either infection. In all these cases, we find that the *final result* of the functioning of a certain organ or of all

the organs together—functioning which changes with external circumstances—is *unique and always the same*: that is to say, the unvaried conservation of the organism itself, which, without such functioning, would be profoundly altered, as is seen in the decomposition of the dead body after the lapse of a few hours.

If an infusorium be irritated with carmine, an experiment due to Jennings, the animal executes first a certain series of movements, then a second series of different movements, then a third and a fourth series; nevertheless all the series, although different from one another, lead always to the same result, namely, to withdraw the infusorium from the action of the new factor which has come into the environment in which it is destined to live. The same response is found in the case of every animal, whether higher or lower, to every physico-chemical alteration modifying its accustomed environment; the response may be various, the motion that of avoidance or approach, according to the nature of the alteration, but all these series of reactive movements, however different among themselves, lead to the *same unique final result*, namely, to bring the animal back to its habitual environment.

And so on, and so forth.

What do these few examples, which could easily be multiplied, teach us? The following most important fact, namely, that when the conditions under which these life-processes take place are altered, the processes themselves change, but *only in such a manner as to keep their result the same*.

This is not the case with natural inorganic processes. The rusting of an iron mineral, the metamorphic transformation of a rock, the melting of a glacier, the condensation of rain, the outburst of a thunderstorm, the fall of an avalanche, the beginning and development of a volcanic eruption, all these are physico-chemical processes, and when the external circumstances under which they take place are changed, they themselves change, *but the final result which they produce is also changed*.

We therefore have here a general distinctive characteristic, *entirely objective, and in no respect subjective or anthropomorphic*, which enables us to divide the whole of the processes of the external world into two great categories—the *teleological* and the *ateleological*. If when a change occurs in the circumstances under which a process takes place, the process itself changes, and also the final result of it, the process is *ateleological*: if with a change of circumstances the process changes, but in such a way that the final result of it remains the same, it will fall into the category of *teleological* processes. The *finalist nature* of these processes is determined, in other words, simply and solely by the *invariance of the final result* to which they normally lead by their reacting, with self-modification, to changed circumstances. It appears to us difficult to imagine a criterion more objective and more impersonal than this.

We are now able to give, in place of the Aristotelian, the following

definition of purpose : *purpose is the final and invariable result to which certain processes normally lead, by reacting, with self-modification, to changed circumstances.*

This definition includes also, as is easily seen, the conscious acts of man for which alone Aristotle made his definition. If during a cold winter man covers his body with wool and warms his house, while during the hot summer he wears light clothing and takes refuge in the mountains, he evidently acts, according to Aristotle's definition, with a purpose in view which exists in the state of a notion before action commences ; but according to the more comprehensive definition of purpose which we have given, there is allowance for two different kinds of reaction to the changed environment, two kinds of reaction which, although altogether different, have both the same single result of maintaining the organism at about the same temperature in both cases. In the same way, a man of business acts with a view to profit, of which he has already a clear notion when embarking on any undertaking ; but his behaviour may be called finalist, according to our definition, inasmuch as we see that a whole series of his actions in dealing with his colleagues, however much these actions may differ in accordance with the circumstances, nevertheless normally lead (apart from certain exceptional cases, then called failures) to the same single result, an increase in his income.

The case we are here discussing of a purely psychological concept which, once suitably enlarged, may be also applied to truly biological and physiological processes, is not the only one which, in recent times, has enlarged and more exactly formulated our conception of life. Another case, for instance, is that of the concept we have of memory. It is well known that certain eminent biologists have boldly advanced the notion that ontogenetic development, with its fundamental biogenetic law of the ontogenetic recapitulation of phylogenesis, is none other than a mnemonic process, by virtue of which the developing organism simply recollects the various phylogenetic stages through which the interminable series of its ancestors passed in the whole course of biological evolution. Without touching upon the brilliant, if somewhat vague, intuitions of Butler, Haeckel, Orr, and Cope, we may refer here to the famous paper of the great physiologist, Ewald Hering : " Ueber das Gedächtnis als eine allgemeine Funktion der organisierten Materie ", and the much-discussed work of the late biologist, Richard Semon : " Die Mneme als erhaltendes Prinzip im Wechsel des organischen Geschehens ".

But we well know the lively opposition which this bold comparison found in the case of the majority of biologists, who, not without justice, if the truth be told, ascribed to the comparison no other importance than that of a harmless metaphor. For *conscious memory*, e.g., of the view of the Gulf of Naples, is, at first sight, a very different phenomenon from the development of the tissues and organs of a vertebrate from a minute initial cell, the fertilised ovum.

This arose from the fact that the mnemonic phenomenon was

taken only in the restricted sense of a *conscious recollection* of a given perception in the past. We may, however, define the mnemonic property as follows: *it consists in the reproduction, from internal causes, of physiological and biological processes in general, for the first production of which the activity of the external world was necessary.* This definition includes not only, and quite obviously, the case of purely psychical memory, but also the most various and fundamental biological and physiological phenomena.

Ontological development, for example, would simply reproduce, through internal causes potentially present in the fertilised ovum (or "specific accumulations" proportionately and gradually deposited in the germ substance),¹ the phylogenetic transformations which originally needed the modifying influence of the external environment. Thus, if we accustom an herbivorous animal little by little to a carnivorous diet, it adapts itself by secreting an appropriate gastric juice; but this secretion, which needed, for its original production, the action of the external factor represented by the animal food, is afterwards produced spontaneously and in anticipation, from internal causes, when the animal food fails to appear at the usual meal time, and the animal merely perceives the odour of it from afar.

As every one knows who has followed my studies of biological synthesis, summed up and stated in final form in my book, *The Nature of Life*,² it is this mnemonic property, conceived in the widest sense in the above definition, that has allowed us to include in it, and thus explain as particular cases of a general property, all the finalist manifestations of life, from the one extreme, the development of the embryo, to the other, the highest and most complicated psychical activity of human genius.

It is not surprising that this method of wider and wider extension of given psychical concepts, to the point of making them include biological and physiological processes properly so-called, yields fertile results: the ancient, irreconcilable dualism between mind and body has been gradually replaced, in science, by the truer view of the fundamental substantial unity of the two categories of vital phenomena. It follows that all the most particular and characteristic properties of the mind, of the psyche, can only be intensifications, specific variations, or complex modalities of very general and more simple properties exhibited by life in all its manifestations. It is thus a matter of rising to the widest possible conception which, while comprehending the psychical facts as particular cases, at the same time includes biological and physiological phenomena in general, which manifest this property in its most general and simplest form.

¹ E. Rignano, *The Centro-Epigenetic Hypothesis*, The Open Court Publ. Co., Chicago, 1911; *The Biological Memory*, Kegan Paul, Trench, Trubner & Co., London, 1925.

² *The Nature of Life* (International Library of Psychology), Kegan Paul, Trench, Trubner & Co., London and New York, 1930.

Once particular and complex properties have been thus reduced to more general and simple ones, we also proceed more easily to form new hypotheses for their explanation, as was the case with my hypothesis of "Specific accumulation", which may serve to explain the fundamental mnemonic property of living substance.

It is this research, striving, by purely intuitive means, to discover the most general and simple *form* which the most characteristic psychical properties, when reduced to their simplest expression, take on in biological processes in general; it is the investigation of the latter with close attention to discover, in each one of their pulsations, *the feeble and simplified echo* of the corresponding more intense and complex psychical activities, finally reducing both to purely energetic manifestations of a new form of energy, with properties peculiar to itself and situated at the basis of life: it is this method of psychobiological synthesis which leads to a conception of life much more complete and adequate than the mechanist view now dominant, according to which all living beings are nothing but a series of purely physico-chemical processes, without any sense or purpose; a conception as cold as death, while life, quivering and palpitating, is its most complete and absolute antithesis.

VI.—CRITICAL NOTICES.

The Right and the Good. By W. D. Ross, M.A., LL.D., Provost of Oriel College, Oxford; Honorary Fellow of Merton College; Fellow of the British Academy. Pp. vi, 176. Oxford, at the Clarendon Press. 1930. 10. 6d.

THE subject-matter of the Provost of Oriel's book is fairly indicated by the title. The main questions dealt with are:—what are the natures of rightness and goodness respectively: what are the relations between those attributes: what things possess them and why. There is also a good deal in the two concluding chapters on the relations between one good and another. And there is a short excursus on Rights, and another on Punishment. The book, though short, is tightly packed and very closely argued, so that the comments which I shall make will necessarily omit a great deal.

Mr. Ross begins by arguing that 'Right' (which he takes as a synonym of 'obligatory') is indefinable. He begins by distinguishing 'right,' which is a characteristic of acts, from 'morally good,' which is a characteristic of motives. This distinction is vital to Mr. Ross's whole book, and it seems perfectly correct—indeed perfectly obvious, once it has been clearly pointed out. To impress it on our minds, he proposes that we should make a further distinction between an *act* and an *action*. The act (*actum*) is that which I do, *i.e.* the change which I originate: the action is the doing, *i.e.* the originating of this change. Thus actions are morally good or morally bad, but cannot be right or wrong; and acts are right or wrong, but cannot be morally good or bad. Moreover, the doing of a right *act* may be a morally bad *action* (as when a man leaves money to charity to annoy his family); and the doing of a wrong act may be a morally good action (as in conscientious mistakes). But if right does not = 'morally good', neither on the other hand does it = 'optimific', as Prof. G. E. Moore at one time held. The statement that the act which is right, *i.e.* which ought to be done, is the one which will produce better results than any other in the agent's power at the moment is certainly not a tautology; and in fact when the plain man thinks that it is right for him to do so and so, he is usually thinking quite as much of the past (*e.g.* of a promise he has made) as of the future.

Mr. Ross has much more trouble with the view that optimificity is the 'ground' of rightness, *i.e.* is what *makes* an act right though

it is not the act's rightness. Mr. Ross's answer to this Ideal Utilitarianism is in essence that the doing of as much good as possible is not the only thing that matters : it also matters *to whom* you do the good. (He might have taken as his text Butler's remark that "we approve of benevolence to some persons rather than to others".) The real error of the Optimific Theory is that it oversimplifies a man's relation to his neighbours, assuming that the only ethically relevant relation is that of being a possible beneficiary ; thus it neglects the 'individual character' of duty. In point of fact there are many other relations to be taken into account besides this one : I have made a promise to A, have done an injury to B, have myself received a benefit from C, and so on. *Each* of those relations is the foundation of a *peculiar* duty. To be sure, there is also the duty of producing as much good as possible, but this is only one duty among others. Thus the Optimific Theory maintains that there is only one ethically relevant relation, and correspondingly only one duty in all circumstances, to produce the greatest good possible : Mr. Ross says that there are many such relations, and correspondingly many duties. And this seems perfectly correct.

Having got so far we are at once faced with the paradox of the 'Conflict of Duties'. Suppose a doctor has promised to visit a patient at a certain hour, may he break his promise in order to assist the victims of a motor accident ? (We will assume that there is not time to do both.) The Optimific Theory merely says, Do whichever will produce most good. This answer is not open to Mr. Ross. He has to hold that the doctor has *two* duties, one arising from his relation to his patient, the other from his relation to the motorists. And his solution is, do whichever of the two duties is most incumbent on you, or is more of a duty. This answer is not only less simple than the other ; it verges on self-contradiction. How can both those acts be duties when it is not in the agent's power to do both ? Does not *ought* imply *can* ? And further, does 'more of a duty' really mean anything ?

This paradox confronts every Intuitionist system sooner or later, in one form or another. Mr. Ross solves it in a manner both bold and ingenious, by introducing a distinction between a *prima facie* duty and a *duty proper*. In a given situation a man may have two or more *prima facie* duties, arising out of the several ethically relevant relations in which he stands at the moment ; indeed he will almost always have a number of these. (Of course they might be *prima facie* duties to the same person, *e.g.* A may be both B's friend and his judge ; a man may even stand in relations to himself, according to Mr. Ross.) Now there may be a conflict between those *prima facie* duties ; indeed there is one more often than not. But there is really no conflict of *duties*. In the given situation there is only one thing which is my duty—however difficult it may be to discover—*viz.*, to do that one among the *prima facie* duties which is then and there most incumbent on me.

It will be seen that Mr. Ross means by a *prima facie* duty very much what Prof. H. A. Prichard is accustomed to call a *claim*; and as this term is in everyday use and is generally understood, we may wonder why Mr. Ross did not adopt it. He does admit that the phrase '*prima facie*' needs apology and is apt to mislead. He warns us not to think that a *prima facie* duty is something merely apparent, something which appears to be a duty but isn't. On the contrary, he insists that it is something perfectly objective, which follows from the nature of the situation (*i.e.* from one of the relations in which the agent stands to others or to himself), and exists whether anyone is aware of it or not. Moreover, it continues to exist unaltered even when outweighed by some other more incumbent *prima facie* duty; thus it is still the doctor's *prima facie* duty to go to his patient, even though it is his duty to break his promise and help the motorists. To use language which Mr. Ross introduces later, *prima facie* rightness is a real though parti-resultant attribute of an act: rightness being a toti-resultant attribute of an act.

Now this objectivity is better brought out by the word '*claim*'. Everyone will admit that there are claims on me whether I recognise them or not, and that they are still there even though outweighed by other more weighty claims. And Mr. Ross does not deny that in this respect '*claim*' is the better expression of the two: but he thinks that in other and more important respects it is the worse. For when B has a claim on A, what are we to say that A has? Not a duty, for perhaps this claim is outweighed by another. But we do need *some* name for A's situation. Secondly, '*claim*' suggests that all duty is social. But self-improvement is sometimes a duty, and one can hardly say that I have a claim on myself, or that my character has. (We might add, thirdly, that in Prof. Prichard's view there will have to be claims which are claimed by no one; *e.g.* the contented and ignorant slave, though he never claims his freedom, yet has a claim to it. And this seems odd.) But I am not sure that these objections are insuperable; *e.g.* we might say that A is '*subject to*' the claim which B is the possessor of. And if they can be got over, *claim* seems definitely the better word. But whichever expression we use, there is no doubt of the reality of the thing it stands for; and it seems to me that Prof. Prichard and Mr. Ross have done a great service to Ethics in bringing that thing clearly to light.

To this distinction between *prima facie* duties and duties there corresponds an important distinction in mental attitude, according to Mr. Ross. We *know* what our *prima facie* duties are as soon as we know the relations in which we stand. Thus if I have promised to meet A at midday, I *know* that I have a *prima facie* duty to meet him at midday. And if I am in a position to save a drowning man, I *know* that I have a *prima facie* duty to save him. What I do not know is, which of all my *prima facie* duties existing at the moment I ought to do, *i.e.* which of them is my duty. All I can do is to weigh them one

against the other (a process akin to perception and one for which no rules can be given); and the result will be only opinion, not knowledge. And this is the more awkward, because it is plain that in almost every concrete situation a man has several *prima facie* duties, and some of them are almost sure to conflict with others. (Of course they will not always conflict: I can both keep my promise to meet A in London, and think out to-morrow's lecture on the way.)

Here Mr. Ross seems to exaggerate a little. May I not say that I *know* that I ought to save a drowning man rather than keep an appointment to play shove-halfpenny? (It must of course be admitted that we do not very often have such knowledge as this.) And surely Mr. Ross ought to add that we do always have a very important piece of hypothetical knowledge in this connection: *viz.*, that *if* in a certain situation where there is a set of *prima facie* duties *x*, *y* and *z* it is my duty to do *x*, then anybody else in the like situation ought to do *x* too. This we know, and do not merely opine.

How do we arrive at knowledge of *prima facie* duties, *i.e.* knowledge of facts of the form 'Anyone who stands in relation R has the *prima facie* duty D'? According to Mr. Ross, it is *self-evident* that (for instance) anyone who has made a promise has a *prima facie* duty to perform it, or again that anyone who has done an injury has a *prima facie* duty to repair it. And we come to know such self-evident axioms, as we come to know other axioms, by intuitive induction. Experience of particular instances of promise-making or of injury is psychologically necessary, and also (according to Mr. Ross) a certain maturity of mind—for what is self-evident is not necessarily evident to babes, imbeciles, or anthropoid apes—but knowledge of the particular instances is in no sense a premise from which our knowledge of the general axioms is inferred.

In all this Mr. Ross appears to have made a great advance upon previous 'Intuitionist' moralists, *e.g.*, on such eighteenth-century writers as Samuel Clarke. They formulated their moral axioms in terms not of *prima facie* duties but of duties *simpliciter*. Thus their formulæ either admitted of exceptions, and hence were not axioms at all, or else were trivial to the point of tautology. Accordingly when they insisted against contemporary subjectivists and utilitarians (theological and naturalistic) that our duties are founded on the 'fitnesses of things' and on the 'eternal relations of things', and that the laws of morality are as objective as the laws of arithmetic, they failed to carry conviction, for they could give no convincing examples. But as soon as we insist that the axioms concern not duties but only *prima facie* duties (or claims) the difficulty disappears. Moreover, Mr. Ross avoids two other dubious doctrines to which they committed themselves, and which brought Intuitionism into merited disrepute, *viz.*, that we have an innate knowledge of moral axioms, and that we can learn what is our duty in a particular case by a process of deductive inference. Yet he is

able to retain that universality and that objectivity for which they contended. I do not know whether Mr. Ross thinks there are also axioms about *duties*, though no one has succeeded in discovering them; I suspect he thinks that there are not, and that every duty grows as it were out of the particular nature of the particular concrete situation in which the agent is. The important contention is that there *are* axioms about *prima facie* duties, and that consequently "there is a system of moral truth as objective as all truth must be" (p. 15), and that "the moral order expressed in these propositions is . . . part of the fundamental nature of the universe" (p. 29).

When Mr. Ross turns to his next problem—what exactly is it that is a *prima facie* duty (or a duty, as the case may be), he gets on to more debatable ground. We ordinarily think, *e.g.*, that it is our duty to return to X the book which we promised to return him. But in one sense of 'do' all we can do is to change our own minds or bodies, *e.g.*, to put our hands round the parcel and then move them to the Post Office. Shall we say then that our duty was not to return the book to X (since this we cannot do) but to *aim* at his getting it back? No, for 'aiming' means 'acting from a certain motive,' *viz.*, from the wish that X may get the book; and it cannot be our duty to act from a certain motive, since our motives are not in our power to produce at will (though doubtless where we act we shall in fact act from some motive or other). It might be thought, secondly, that our duty is to do what is *likely* to result in X getting it. Mr. Ross rejects this too. For suppose X does not in fact get the book, *e.g.*, because the postman steals it on the way. Then, Mr. Ross holds, I have obviously failed to do my duty. I promised to return the book to X, and if X hasn't got it, I have not done what I promised. Then is it my duty to do what *will in fact* result in his getting it? Not quite. For, on the one hand, we must not separate the result from the act, which is the bringing of it about. The act not results in, but is the producing of, its so-called 'consequences'; and it is the producing of its remote consequences no less than its immediate ones. And on the other hand, other causes, *e.g.* the postman, contributed to the book's arrival. We ought to say then, according to Mr. Ross, that my duty is to *ensure* the arrival of the book. If I am to have done my duty two conditions have to be fulfilled: (1) the book has got to arrive; (2) I have got to be a part-producer of its arrival. *Both* these conditions are necessary, and neither is sufficient by itself.

This doctrine has several singular consequences, some of which Mr. Ross admits. It will follow, he admits, that however carelessly I pack the book, so long as X gets it I have done my duty; and however carefully I pack it, I have failed in my duty if it does not arrive, *e.g.*, if the postman steals it. Now this is very odd, as will be seen if we take an extreme case. Suppose that, intending to send the book to a bookseller to be sold, I absent-mindedly write X's name and address on it instead, and he gets it. Mr. Ross must

then say that I have done my duty. But surely it is plain that I have not. I have acted *wrongly* but *fortunately*. X has his rights, but I have by no means *done right*.

It follows too (as Mr. Ross also admits) that if the book fails to reach X, however carefully packed and posted, then it is my duty to send another copy. Mr. Ross sees no difficulty in this; he thinks it actually is my duty. But is it? Surely one would say "It is *not my fault* that you did not get it"—and truly. This means that one has not committed a breach of duty, *i.e.*, that one has done one's duty. And this is further shown by the fact that X now has a claim *not* against the sender, but against the Post Office. And I think we should all agree that if X prosecuted me on the ground that I had not 'returned' his book he would be acting very iniquitously. The very most we can concede to Mr. Ross is that X still has *some* claim on me; but not the *same* claim as he had before I posted the book, or if the same, at any rate it has far less 'weight' than it had at first. And I am not sure that we should concede even this much. It might well be held that if we do buy X another copy, that is an act of pure generosity and not a duty at all. Moreover, even so we shall not be *returning* the book he lent us, but giving him a new one instead; so that even according to Mr. Ross we shall not be doing what we promised. Indeed we *cannot* now do what we promised; therefore it is no longer a duty to do it, for there is no duty to do the impossible. (In actual fact, no doubt, we should never be quite sure that we had not been careless, and if we have been, everyone admits that it is our duty to send a new copy.)

Will it not also follow that if I post the book, and unknown to me X has died in the meantime, I have failed in my duty? I promised to return it to him; and if he is not there to receive it, I have not succeeded in returning it. Or again suppose its non-arrival is due not to theft but to disease: *e.g.*, on my way to the post office I am smitten with paralysis. Here again I have not returned it, and so I have failed to do my duty, according to Mr. Ross. But is it not plain that in fact I have done it?

The right view, I suggest, is rather as follows: The event E, say X's getting of the book, depends on a number of cause-factors *a, b, c* . . . taken together. It is in my power to bring about *a*, but it is not in my power to bring about the others. My duty is *to do all that is in my power to bring E about*: *i.e.* to produce all those events in my power which together with others (if those others exist) will in fact bring E about. Perhaps E will not in fact come about after all. But that is not my fault. If I have done my part, I have done my duty. (Is not this what people really mean by 'doing what is likely to result in E'?)

We must note, however, that my duty is not simply to bring about *a*. Otherwise I should have done my duty if I wrote X's name and address by mistake. My duty is to cause not just *a*, but 'a as

a part-cause of E'; i.e., to do *a* with the thought that it is a part-cause of E. This amounts to saying that I must act with a certain *intention*. But this is not an objection to the theory. For intention is not the same as motive—I may even intend what I don't in the least wish for, as when I intentionally drive to the public danger, not in the least wishing to endanger the public, but only wishing to arrive in time. (This is perhaps what people are thinking of who speak of 'aiming'.)

We must also note that there are two senses of 'do' (and of 'act'). In one sense 'doing *x*' just means being the whole cause of *x*. In another sense, and a much more common one, it means {being the whole cause of *w* with the thought that *w* is a part-cause of *x*}—all this and nothing less. Thus if as I walk to the Post Office someone asks me "What are you doing?" I may give either of two answers: (1) "I am walking through the porter's lodge". (2) "I am returning so and so's book". And both answers will be true.

If after all this we ask Mr. Ross the stock question, whether the rightness of an action (or rather act) depends upon its consequences? I think his reply is, No, its rightness is intrinsic, that is, it depends on the act's own nature, not on anything outside it. But then, he will add, the act's nature is, to be the bringing into being of a certain state of affairs. So the rightness does depend upon the nature of the state of affairs brought about: but this is not a *consequence* of what we do—though often enough confused with one—it is just the what is done, what we might call the *content* of the act. If this is the right interpretation of Mr. Ross, he holds that Utilitarianism (both in its hedonistic and its 'Ideal' forms) has committed two distinct errors, which so far as I can see are logically independent. (1) It has confused the content of an act with its consequences; (2) it thinks that the only ethically relevant element in that content is the *amount* of good produced, whereas its *manner of distribution* is really no less relevant: it ought to be distributed in accordance with the particular claims that particular people have on the agent, which again arise out of the particular relations in which they stand to him.

Mr. Ross concludes his discussion of the Right with two appendices, one on Rights, the other on Punishment. The first is concerned with the statement that rights and duties are correlative. Mr. Ross proceeds to show the gross ambiguities of this statement (the complacent repetition of which by 'edifying' writers has become almost nauseating), and to consider in which of its many senses it may be true. With the greater part of what Mr. Ross says on this it is difficult to disagree. But why does he assert at the end that the duties arising out of non-contractual rights (which he reasonably enough calls 'natural rights') are less stringent than those arising out of contracts? A man's right to life is a natural right if anything is. And surely it is much more weighty than his right, say, to an hour's tuition a week? Correspondingly, his neighbour's duties to him in respect of the first are more stringent than their

duties in respect of the second. Nor is a natural right merely *non-contractual*: it is *basic* to contractual rights—it is that without which no contracts could be entered into. Such natural or basic rights belong to every moral agent as such, not indeed outside of society (must this misrepresentation go on for ever?) but irrespective of the particular nature of the particular society which he may happen at any moment to belong to.

Appendix 2 maintains that the justification of punishment lies in the fact that the offender by violating the rights of others has *pro tanto* forfeited his own; therefore the State has the right (not the duty) to use him *pro tanto* as a means either for the securing of the welfare of others, or in order to improve him against his will. Mr. Ross admits that it may sometimes be right to punish the innocent (or rather to inflict pain on them by process of law?) not because it is expedient that one man should die for the people, as Utilitarians hold, but because the rights of the whole body of citizens may on occasion outweigh the no less real rights of a single individual; for instance, to hang an innocent man whom the general public believed guilty might be the only way of stopping prospective criminals from committing wholesale murder.

I shall deal rather more briefly with the second part of Mr. Ross's book: not because it is not of great interest (indeed, some of its doctrines are likely to provoke lively controversy) but because it appears to me—with all respect to the eminent authorities who think otherwise—that *right* is the fundamental notion of Ethics, and that *good* is only of secondary importance.

Mr. Ross begins with a chapter on the meaning of the word 'good'. He first distinguishes the attributive use (*e.g.* 'a good horseman') from the *predicative* use ('pleasure is good'). In the attributive use, which as he strikingly says is much the commoner, good only means 'good of its kind'; and this in turn means 'efficient in what one sets out to do'. Thus in this use good applies primarily to persons. If we apply it to a mere thing, we are either thinking of its maker's purpose or of our own in using it, or we are half-personifying the thing and attributing to it a purpose of its own. This seems, if I may say so, rather unfair on 'things'. A cat is not a person; certainly an oak tree is not. So I suppose Mr. Ross would call them 'things'. But may they not quite literally be called good and bad? (As a matter of usage, we generally say 'fine' or 'poor': that is a fine cat, this is a poor oak-tree.) This is not because they are *trying* to achieve some end but because there is a standard or norm to which this individual does as a matter of fact come closer, or less close, than other members of its species. And when we say 'comes' closer, we mean that it simply *is* closer, not that it has got there by trying. I suggest therefore that Mr. Ross has failed to distinguish between a standard and an object of desire; which is the more natural, because the word 'end' is commonly used for both.

However this may be, it is the other, the predicative, sense which

is important in Ethics, as when we say ' x is good'. And within this use, it is the sense in which good means 'good intrinsically', *i.e.*, not as a means; and within this again, the important sense is 'ultimately good' as opposed to mere 'good on the whole'. (Would not 'wholly good' bring out more clearly the contrast with 'good on the whole'?)

What, then, is the nature of goodness in this its most important sense? The chapter in which Mr. Ross discusses this occupies no less than a third of the whole book. The argument is very close, and is complicated by a good deal of polemic, so that it is not very easy to see the wood for the trees. The main plot of the chapter seems to be as follows:—There are three possible views about goodness: (1) that it is a quality; (2) that it is a relation (or rather a relational property?); (3) that it is an objective in Meinong's sense, *i.e.*, something of the form 'that A is B'. Now it is not a relation nor an objective, therefore it must be a quality. But it is an odd sort of quality, (a) qualifying facts not substances; (b) resultant not constitutive; (c) toti-resultant not parti-resultant, *i.e.* dependent on the whole nature of its subject not merely on a part. And all this is true of rightness and beauty as well as of goodness. But may not these qualities be *more* than toti-resultant, *i.e.*, depend not only upon the total nature of the fact qualified but upon something else in addition, *e.g.*, upon the fact's relation to a mind? Mr. Ross holds that this is true of beauty (so that in regard to it we come back to something like view no. 2), but not of rightness and goodness, which are just toti-resultant qualities of certain facts, in no way dependent on our feelings of approval, still less upon our thinking. (Of course those facts will usually or always be facts *about* minds, but this does not make them or their qualities relative to minds.)

It will be seen that Mr. Ross, as he himself emphasises, agrees in substance with Professor Moore's account of goodness in *Principia Ethica*, though not with his 'optimific' theory of rightness (which, however, Professor Moore appears since to have given up.)

There are several points here which call for comment. Mr. Ross devotes a good deal of space to a criticism of Prof. R. B. Perry's theory that goodness or 'value' is a relation between something and a mind, *viz.*, the relation of 'being an object of interest to'. As he says, such a theory—despite Prof. Perry's protests—cannot allow that anything is intrinsically good. But does Prof. Perry perhaps mean that value is not so much a *relation* as a *quality of a complex*, *viz.*, of the complex 'mind interested in so-and-so'? In that case he escapes Mr. Ross's criticism; for complexes no less than simples can have intrinsic qualities, and yet of course relations are essential to their existence.

Again *whose* interest (asks Mr. Ross) is the goodness of a thing relative to? My own? Or a certain group of men's? Or the majority of mankind's? Whichever alternative is chosen, a situation is bound to arise sooner or later in which A can truly say that

x is good, and B can truly say that x is bad; whereas it is in fact plain that both these statements cannot be true at once.

Professor Perry sometimes adopts another usage, and says that goodness consists in *being desired*. Mr. Ross rightly objects that in that case only the non-existent is good; not 'being desired' but 'exciting desire' must really be the meaning that Prof. Perry has in mind. Moreover, we must say *positive* desire; otherwise toothache, which excites desire for its own cessation, will be good. So far, all is clear. But Mr. Ross now takes a very odd step in his argument. *Why* does A excite my positive desires? he asks. Prof. Perry cannot answer "It excites them because it is good" (which is the natural answer); else he would be surrendering his theory. The only answer open to him, according to Mr. Ross, is "It excites them because it is pleasant"; and this would be no answer at all, unless one thought that pleasure is intrinsically good. Moreover, he will have to say that nothing else is intrinsically good—for no other excitant of positive desire is available to him. Having triumphantly reduced Prof. Perry to Hedonism, Mr. Ross then leaves him and passes on.

But surely Prof. Perry has a very easy defence. He has only to refuse to answer Mr. Ross's question. It might be just an ultimate fact about human nature that certain things excite our positive desires and others don't; there might be no 'why' about it. Indeed, on the face of it, it is an ultimate fact. We have certain innate propensities and certain things arouse them, and there is an end of the matter. It seems to me therefore that though Mr. Ross's other arguments against Prof. Perry are strong ones, *this* argument proves absolutely nothing.

Mr. Ross is more sympathetic towards Prof. W. M. Urban's theory (no. 3), that value is an objective, *i.e.*, that 'the value of A' is really a name for the *proposition* 'that A ought to exist'. He agrees that value, if a quality, is a very queer one, and that it qualifies not indeed propositions, but probably not substances either; he inclines to the view that it qualifies *facts*. Thus 'that Jones is good' is not really a fact about Jones (as 'that Jones is red-haired' is); it is a fact about a fact about Jones. The fact which we are really stating is, *e.g.*, 'that the fact that Jones habitually tells the truth is good'. We might express this by saying that facts into which value enters are always *second-order* facts. If this doctrine is true it is very important. And it seems extremely plausible. But I cannot find that Mr. Ross brings forward any strong arguments for it. He ought at least to be able to show that paralogsms arise when one takes value to be a quality of substances. (Of course we could, and should, still say 'this man is good' and 'this picture is beautiful'. Only the *analysis* of such propositions would be more complicated than it appears at first sight. Cf. the analysis of existential propositions.)

And Mr. Ross makes another very important concession to the

Anti-qualitativists when he distinguishes between two sorts of non-relational attributes: (1) *constitutive* attributes, like yellow or square; (2) *resultant* or *consequential* attributes. Value, he maintains, belongs to the second class. (Here again Mr. Ross is in substance following Prof. Moore's doctrine that "intrinsic properties describe the nature of what possesses them in a way in which values do not". Only he objects to the word 'describe'.)

This distinction between two sorts of intrinsic attributes is of course very familiar, as Mr. Ross points out. It is just the traditional distinction between differentia and property (*proprium*). The having all its sides equal is the differentia of an equilateral triangle, and having all its angles equal is a property. Now the trouble here is that the distinction seems only conventional; we might equally well say that equiangularity was the differentia and equilaterality the property. But in the case of goodness, curiously enough, this trouble is avoided. The dependence of goodness upon other attributes seems to be *objectively one-way*. Goodness differs, however, from other resultant attributes (*e.g.*, equiangularity) in that it results from the *total* nature of that which has it, not merely from a *part* of that nature (*e.g.*, equality of sides). Hence we may say that it is a *toti-resultant* attribute. So likewise is rightness. But *prima facie* rightness, on the other hand, is a *parti-resultant* attribute.

This doctrine concerning the resultant or dependent character of goodness and rightness seems to me not only plausible but (once it is pointed out) obviously true, and of fundamental importance.

Beauty, too, is *toti-resultant* (I suppose there is also *prima facie* beauty, which is *parti-resultant*). But according to Mr. Ross, it is resultant on *more* than the whole nature of the beautiful object (? fact), *viz.*, on relation to a mind as well—and a causal relation at that, the relation of 'arousing æsthetic emotion'. Mr. Ross is, however, careful to avoid saying that 'being beautiful' means *actually* arousing æsthetic emotion; he says it means 'having the power to arouse it'. And thus he is able to say that a thing can be beautiful when no one is looking at it, and that if A and B disagree about the beauty of the same thing, one of them must be wrong. Thus beauty still has the requisite amount of objectivity.

This is a surprising conclusion; and two at least of the premises on which Mr. Ross bases it are even odder. The first is that 'so much of beauty—the whole of it, I suppose, strictly speaking—is sensuous' (p. 126). Is not this a very singular surrender to Miss Gertrude Stein? Does Mr. Ross really believe that the *Iliad* or *The Tempest* is just a string of noises or perhaps of wavy black lines, or of those plus visual and auditory images? Moreover, mathematicians assure us that mathematical demonstrations are beautiful, and clearly a set of necessarily connected universal propositions (or whatever a demonstration is) does not even contain a sensuous element. Of course, Mr. Ross may say that neither poems, plays, nor

demonstrations can ever be beautiful. But if he does, he is simply leaving out of account one of the most important kinds of value.

The other premise is that what is sensuous must be subjective; for sense-data are, according to Mr. Ross, mind-dependent. (So far as I can make out he even regards them as mental events, so that when I look at a landscape, I am green, and when I smell a rose, I am fragrant: which is odd, though not impossible). But is it not plain that the word 'subjective' is being used in two utterly different senses? In the conclusion it means 'dependent on being admired or approved by a mind'. In the premise it means 'related to a mind as event to substance'. Let sense-data be as mental as you please: still mental events, like others, have a character of their own, which they possess whether we have emotions towards them or not. And their beauty *might* be a part of their character, for all that Mr. Ross has shown. In short, beauty might always qualify something psychical or partly psychical, and yet it might be an intrinsic toti-resultant attribute of that something, not dependent for its being upon anybody's admiration.

I should also like to protest against Mr. Ross's use of the word 'power' in this connection. 'Power' here means 'power to *cause*' ('to produce æsthetic enjoyment,' p. 129). But must we not distinguish between the *cause* of a feeling and the *object* of that feeling? For instance, A tells me that B has stolen my umbrella, and I am angry with B. Here the *cause* of my anger is A; but I am not angry *with* A—on the contrary, I am grateful. It is B that I am angry with. The difference is made still clearer when we reflect that the *cause* of a feeling must be actual, but the object may very well be imaginary. A may have been lying, and perhaps there is even no such person as B at all. The distinction is particularly important here, because what is beautiful is as often as not purely fictitious *e.g.*, the visit of Priam to Achilles; and if real, it is often remote in time or place. Mr. Ross thus seems obliged to hold that it is the printed pages which are beautiful; for they alone are actual, and they alone have the power of producing feelings or anything else. Mr. Ross's view would have been much more plausible if for 'power to produce' he had substituted 'power to become the object of'; but this is a power of an entirely different kind.

With the remainder of the book I shall deal more briefly. In chapter 5 ('What things are good?') Mr. Ross gives the following list of intrinsic goods: (1) virtue; (2) some pleasures; (3) knowledge and right opinion; (4) the allocation of pleasure and pain in accordance with merit. (I wonder what Mr. Ross would say about mercy and generosity? That they are bad?) All other goods, he holds, are reducible to some combination of these, or else they will turn out to be purely instrumental. Love, for instance, is a blend of virtue and knowledge, together with the pleasures arising from them. This seems a not very convincing analysis of love, though it is difficult to think of a better one. But I am inclined to ask instead

whether an emotion or emotional disposition can be described as a compound at all? Is it not rather that it resembles each of its so-called 'elements', without being *compounded* of them?

In chapter 6 ('Degrees of goodness') Mr. Ross maintains (1) that all goods are comparable; (2) that some goods are commensurable. Thus virtue is better than knowledge, knowledge than pleasure. (Good, no. 4—allocation according to merit—seems to drop out of sight in chapters 6 and 7.) *Within* each of these kinds commensuration is possible in principle, though not always in practice. Thus we could say, with McTaggart, that a plate of turtle soup is *twice* as pleasant as a plate of pea soup. And in the next and last chapter ('Moral Goodness') Mr. Ross courageously assigns *marks* to various sorts of virtue, rating conscientiousness + love at 18, and conscientiousness alone at 10.* I think he would also be prepared to assign marks to various kinds of knowledge and right opinion, though he does not actually do so. He only says that knowledge is better, the more general its object is, and that the value of opinion depends upon the generality of what is opined, together with the amount of ground it has, and the degree in which our confidence in it corresponds with its groundedness. (This is odd. It would seem to follow that knowledge of the law of contradiction is the best of all the knowledge we have. And it is really even clear that a physicist's well-grounded opinions concerning the increase of Entropy are more valuable than a historian's well-grounded opinions concerning the Principate of Augustus—or for that matter, than his less well-grounded opinions concerning the fall of the Western Empire?)

All this is very controversial ground, and I have neither the competence nor the wish to enter upon it. But perhaps it is safe to express one doubt. Let us grant that I should prefer one bar of chocolate to one bun, and that I should just not prefer one bar to two buns. Does it really follow that one bar of chocolate pleases me *twice as much* as one bun? I am unable to see that it does. Of course I can arrange these pleasures in a series such that one pleasure is *between* two others. Eating nothing gives me no pleasure. Eating one bun gives me more. Eating either one bar of chocolate or two buns gives me more than that. Eating three buns gives me more still. But surely what corresponds to such a series is the series of *ordinal*, not of cardinal numbers. And if so, from the fact that a certain pleasure is "no. 2" in such a series it will not by any means follow that it is 2 times as great as "no. 1" or $\frac{2}{3}$ as great as "no. 3". And the like would be true with regard to knowledge and virtue.

But if there is commensurability *within* each kind of goodness, is there commensurability *between* the three kinds? Mr. Ross

* Mr. Ross's doctrine of *surplus motivation* comes in here. The case supposed is one in which desire to do right *would* have been sufficient by itself to make the man act, but as a matter of fact a benevolent desire is present as well.

appears to think that pleasure is commensurable with knowledge. Thus a very great loss of pleasure would not counterbalance a small gain in knowledge, though a considerable loss of pleasure would. But he holds that neither pleasure nor knowledge is commensurable with virtue. Virtue is *better* than knowledge or pleasure (*i.e.*, they are comparable) but it is *infinitely* better.

It is difficult to reject this latter doctrine, yet difficult also to accept it. Would Mr. Ross agree with Cardinal Newman (or rather with the opinion of the Church as Newman represents it) that it is better "for all the many millions [on the earth] to die of starvation in extremest agony, so far as temporal affliction goes, than that one soul, I will not say should be lost, but should commit one venial sin, should tell one wilful untruth though it harmed no one, or steal one poor farthing without excuse"? Is not this a very hard saying? To be sure, if a moral agent had to *choose* between causing this amount of misery, and causing that sin, Mr. Ross can say that he ought to cause the sin: for this is just a conflict of *prima facie* duties, and my duty not to lie or cause another to lie is outweighed by my duty to the rest of mankind. But if it is not a question of choosing or acting, if we are simply asked which of the two states of affairs is *better*, Mr. Ross must certainly give the same answer as Newman.

All students of Philosophy in Oxford owe much to Mr. Ross, and it would be impertinent for one of them to praise his book, beyond mentioning that it is very clearly written and evidently compresses a great deal of thought into an almost disconcertingly small compass. The views which he expounds here, or many of them, have been familiar to his own University for several years; it cannot be doubted that they form a substantial contribution to Ethics, and one can only rejoice that they will now be accessible to a wider public. But when a new edition is called for, will Mr. Ross please provide an analytical table of contents, or an index double the size of this one, or both?

H. H. PRICE.

A Modern Introduction to Logic. By L. SUSAN STEBBING, M.A.
Methuen & Co. Ltd. 1930. Pp. xviii, 505. 15s.

It has been lightly said of many works that their publication "meets a long-felt need". In consequence, the truer the assertion the more inadequate it is to the occasion. *A Modern Introduction to Logic* does not merely meet the need, it meets it generously. Not only does it satisfy the actual requirements of the student (examinations being what they are); it should, in addition, go a very long way to restore Logic to a position of consequence in the curriculum of University studies.

Miss Stebbing's task was an extremely difficult one—to present a coherent account of the subject in which the gulf is bridged between

the stereotyped doctrines of tradition and the more fluid, more controversial and generally more difficult topics the development of which belong only to the most recent history of the science. There are few who could have performed this service, and fewer still who could have attained an equal measure of success. Contemporary logicians most qualified to discuss recent developments have not, in general, been under the necessity of preparing students for the ordinary type of examination, whilst those possessing the latter qualification are often insufficiently familiar with the later development of the science. Miss Stebbing possesses both qualifications in a high degree, and she has, in this work, turned them to excellent account.

The volume is divided into three parts. The parts have no specific titles, but they may be roughly (and misleadingly) described as follows. Part I. is mainly concerned with the topics commonly treated under the head of 'Deductive Logic'. Part II. is concerned with Induction and Scientific Method. Part III. contains four extremely valuable chapters of a supplementary character. This description, however, is misleading, in that it completely fails to do justice to the originality and coherence of the general plan and to the many merits in the details of its execution.

Coherence, in particular, is a quality difficult to communicate through the medium of a review. Something of the general character of the work, however, may, perhaps, be indirectly suggested by a selection from among the points of interest that occur to one of Miss Stebbing's readers. The following comments are intended to do no more.

Chapter I., *Reflective Thinking in Ordinary Life*, provides us with a fresh and lively discussion of the psychology of thinking. Freshness and liveliness, in fact, are pervading characteristics of the book. Fundamentally this is due to the fact that the student is on almost every page introduced to genuine problems, problems on which, one feels, the author is still reflecting. To this liveliness, which is all important, there corresponds a liveliness in ornament and illustration. True, we note the reappearance of some venerable examples, Torricelli's tube, the black swans of Australia, and the human qualities of Socrates; but in their new setting these familiar illustrations greet us like old and friendly faces at a reception arranged in honour of distinguished contemporaries.

Thought requires expression, and so in Chapter II. we are led to consider *Language*. Here, too, we find much that is new to the textbook—if Miss Stebbing's work may be so described. The student receives an early introduction to the distinction between a demonstrative and a descriptive phrase, for on this there is much to follow.

Here, too, things begin to be controversial. There will, no doubt, be many who will disagree with Miss Stebbing on the subject of ambiguity. The traditional Logicians are taken to task for saying that such words as "vice" (standing for a moral disposition, and

for a carpenter's instrument) and "fair" (standing for a complexion and for a just bargain) are ambiguous. "These words," says Miss Stebbing, "are not *ambiguous*; they are *different words*."

The first of these assertions is more plausible than the second, though Miss Stebbing would seem to regard them as equivalent. They are not ambiguous in any sense which implies a genuine risk of confusion. But it is strange if we cannot truly say that the same word "vice" is used in these very different senses, and it is strange to think that a foreigner cannot correctly count the number of times this same word occurs in an English text unless he understands the language.

In connection with the problem of ambiguity the issue is not of very great importance, but unless it is correctly settled, great havoc may be wrought in the general theory of symbols. How, precisely, would Miss Stebbing define 'the same word'? Not, it would seem, in terms of a class of sounds or marks used for the purpose of expression and possessing a certain minimum of resemblance.

Elsewhere (on p. 31) Miss Stebbing seems to suggest that since a word is not a mere unmeaning mark, it must be in some sense the mark plus its meaning. A given word is thus, perhaps, to be defined by reference to a class of marks and a *specific meaning*, in such a way that a certain degree of absence of resemblance either in the marks or in the meanings constitutes a difference of word.

We proceed in Chapter III. to a very lucid discussion of the various ways of knowing, with special reference to the distinction between acquaintance and knowledge by description. On page 24, however, we find a somewhat perplexing footnote. Here we are told that Mr. Russell's distinction is distinguished from that of William James in that the former relates to the way in which *symbols are used*. This, however, is not implied by the doctrine as expounded in the text. The remark presumably points to the intimate connection that obtains between knowledge by description and the use of descriptive phrases. It suggests that an account of the latter is relevant to analysis of the former, whereas it might be the case that knowledge by description would occur even though there were no such things as descriptive phrases.

In connection with the topics of this chapter, one feels the need for something to be done—perhaps by Miss Stebbing in a later edition?—to ease the difficulties of the student in the face of the wealth and the ambiguity of the terminology in common use to refer to the relations that obtain between words and what they signify. Words and phrases *mean*, *refer to*, *symbolise*, *apply to*, *express*, etc. These words are employed in common speech, and by logicians, almost interchangeably, whilst a number of importantly different relations are crying out to be distinguished. Thus, proper names are said to *apply* to things with which we are acquainted. Characteristics expressed by descriptive phrases, are also said to *apply* to the thing described, and in still another sense the descriptive phrase *applies*.

Similarly, when the beginner reads, on page 24, that characteristics are expressed by descriptive phrases and on page 140 that such phrases do not express any constituent of the proposition, he may experience bewilderment. Such verbal inconsistencies argue no lack of clearness in the mind of the author. It is simply that in the current usage of logicians a word is doing double duty.

In Chapter IV. we reach the Proposition, its constituents, and the classification of propositional forms. The exposition is an extremely skilful synthesis of what is stable in the traditional formulation, of the refinements due to Mr. Johnson, and of the contribution of logicians of Mr. Russell's school.

Whilst in the main the influence of Mr. Johnson is predominant, there are two interesting divergences from his lines of treatment. In agreement with Mr. Johnson, Miss Stebbing distinguishes simple and compound propositions, compound propositions into two contrasting classes, conjunctive and composite, and subdivides the composites into several special forms.

With Mr. Johnson, however, the distinction between simple and compound propositions is explicitly only relative. Intrinsically, a simple proposition may be of any form whatever. Miss Stebbing, on the other hand, describes as 'simple' only such propositions as are ultimately so, and identifies these with Mr. Russell's atomic propositions. This, of course, restricts the application of the term to propositions which never find expression in ordinary discourse, and it compels one to load one's tentative illustrations with qualifying phrases. "Charles married Henrietta" expresses a simple proposition, assuming 'Charles' and 'Henrietta' to be genuine proper names. A further assumption is necessary to guard against lurking generality in what is meant by 'married'.

This contrasts with that convenient traditional usage in which a simple proposition would seem to be (whatever the traditional definition) one possessing that degree and kind of simplicity marked by expression in a simple grammatical sentence.

On the other hand, it is precisely because a simple grammatical sentence does not in general express a simple proposition that the usage is so misleading. Miss Stebbing's departure has therefore much to recommend it.

The second divergence from the lines of exposition familiar to readers of Mr. Johnson is in connection with the composite forms.

Miss Stebbing will not recognise Mr. Johnson's 'counter-implicative' form among the compound propositions. Except for the use of Mr. Johnson's terms, the classification of *Principia Mathematica* is adopted—a threefold classification of the compound forms into Implicative,¹ Alternative, and Disjunctive.

¹ It will be noted that Miss Stebbing uses the term 'implicative proposition' in two senses. In the first, that of the present context, both implicans and implicate must themselves be propositions. In the second they need not be. It is in the latter sense that a general proposition may be said to be an 'implicative proposition'.

That the question is one on which there can be two opinions would seem to be due to the fact that logicians do not usually distinguish between the classification of compound propositional forms and the classification of the compound functions. It is curious to note that Mr. Johnson, who appears primarily to be discussing propositional forms, bases his classification on an enumeration of the functions, whilst the authors of *Principia Mathematica*, who are primarily interested in the functions, present a classification based on differences in the propositional forms.

On the question of forms, there can be no dispute. Mr. Johnson's 'implicative' and 'counter-implicative' propositions are of precisely the same form. If, however, the question be: Given two propositions, p , q , what are the compound functions? we may take the sense of the relevant relation into account and say that *If p then q* , and *If q then p* , are distinct and independent functions.

It is not sufficient to reply that given the implicative function we can derive an example of the counter-implicative by a simple immediate inference, since what is so derived is not a function of p , q but of \bar{p} , \bar{q} . The strong point in Mr. Johnson's position is the independence of the counter-implicative function of p , q , in relation to the other three.

On this view we should conclude that Miss Stebbing is right in refusing recognition to the counter-implicative in this chapter, which is concerned with propositional forms. On the other hand, it would require a place in Chapter X., where the compound functions become the subject of exposition.

From the middle of Chapter IV. to the end of Chapter VII. we are concerned in the main with traditional Formal Logic,—the traditional categorical forms, the doctrine of opposition, the immediate inferences, and the doctrine of the syllogism. The whole exposition is a model of proportion and arrangement. All the important facts are there, contained—without undue compression—within the compass of some sixty pages.

With the limitations of this system and with much of its paraphernalia, Miss Stebbing is obviously impatient, but impatience is well restrained. There is perhaps, in places, a tendency for criticism to follow with precipitance upon the heels of exposition, but overt disapprobation finds only the highly sublimated expression of an occasional acid footnote.

Chapter VIII. is entitled *Symbols and Form*. The first two sections, on the utility of symbols generally, and on mathematical symbols, are plain sailing, even to the beginner. The third section, on Form and Function, is indicated in Miss Stebbing's prefatory guide to students as intended for later reading. It contains a very interesting, but difficult, discussion of Mr. Russell's notion of a propositional function, and of the relation of this to the ordinary function of mathematics. The difficulties are largely due to Mr. Russell, but in part also to the fact that it is not perfectly clear what Miss Stebbing takes to be the nature of 'the ordinary function of mathematics'.

At the outset the impression is conveyed that the ordinary function of mathematics is an expression containing two or more variables, and that a determinate correspondence is specified by the relation holding between the variables. It is then explained that Mr. Russell uses the term 'propositional function' in a sense such that the expression " x is hurt" is a propositional function, and that according to Mr. Russell this type of function agrees with the ordinary function of mathematics in containing an unassigned variable, and differs from it in that the values of the function are propositions.

When Miss Stebbing proceeds to discuss these statements it looks as if the first conclusion to be drawn must be that since the propositional function may contain only a single variable there certainly cannot be a determinate correspondence between two or more. But this conclusion is not immediately drawn. Instead, Miss Stebbing proceeds to discuss certain mathematical expressions which, like the propositional function, contain only a single variable—expressions like " $\log x$ ". These expressions are all descriptive phrases containing a variable, and we are told that they are descriptive functions. But such expressions, of course, commonly occur as part of the larger expression of the type to which we were originally introduced, such as $y = \log x$, in which the variable in the descriptive function becomes the argument of a functional relation. The question then turns on whether there is anything which stands to the propositional function as the term described stands to the mathematical descriptive function—whether, in short, a propositional function of the form x is hurt can be expanded into the form $y = x$ is hurt, in the way in which $\log x$ is expanded into $y = \log x$. Miss Stebbing decides that there is not, and by this route reaches the conclusion that there is no precise analogy between the propositional function and the ordinary function of mathematics.

Teachers of Logic will be especially grateful to Miss Stebbing for Chapters IX. and X., where for the first time a number of topics of the first importance are assembled in a general Logic. They, too, are not easy reading for the beginner and belong to a more advanced stage of instruction. But they provide just what a textbook should provide—a complement to oral instruction and a basis for discussion.

Descriptions, Classes and General Propositions are the topics of Chapter IX. In § 4 we are introduced to Mr. Russell's theory of 'incomplete symbols' and to 'logical constructions', and in § 4, on Existence, it is explained just how it is that we can think of unicorns and round squares when, in fact, there are no such things to be thought of. Under the best of circumstances, Mr. Russell's theory of constructions could hardly be made simple. One difficulty is absence of any clear example of an *obvious* construction. It is clearly undesirable that the exposition of a logical concept should depend upon an analysis of the data of perception or a consideration of special theories as to the nature of the self or of material things.

Miss Stebbing suggests that logical constructions must probably be defined through incomplete symbols as they occur in the verbal expression of true propositions, and not of any proposition true or false. To which it may, perhaps, be added that it is preferable to start from propositions that assert existence rather than from those which assert that something does not exist—where it is obvious from the outset that though the proposition is true, the object in question exists in a very queer sense.

Incidentally, one must congratulate Miss Stebbing for extracting from Prof. Moore some valuable hints, hitherto unpublished, contributing to the solution of this problem.

Anent the existence of unicorns there is one passage where some restatement would seem to be required. On page 160 Miss Stebbing suggests that the proposition 'I am thinking of a unicorn' does not assert that the property of *being a unicorn* and the property of *being thought of by me* both belong to something, because (one understands) *being thought of* is not a property at all. But what, in particular, is wrong with the property of '*being thought of*'? Surely it is quite a good property and sometimes does belong to things. But like the property of *being a unicorn*, it never belongs to unicorns.

Chapter X. is probably the best introduction to "Logistic" that has yet been written. Chapter XI. is the only one as to which one doubts the correctness of its position. Its subject 'System and Order' has obvious connection with its predecessor, but is equally connected with Part II. It might even have found a place in Part III. Part I. ends, very appropriately, with a general discussion of *Inference and Implication*. In her discussion of the definition of 'inference', Miss Stebbing is fully alive to all the lurking dangers. Few logicians succeed in approximating to a definition which does not presuppose a special theory or exclude obvious cases.

It is not infrequently defined so as to involve an arbitrary limitation to the processes of thought which proceed from proposition to proposition. This, however, leaves open the important and interesting question as to the occurrence of transitions of thought resembling inferences as so defined, except for the fact that the 'data', and possibly what corresponds to a conclusion, are not propositions. Miss Stebbing appears to consider that the data at any rate may be sense data, facts or 'complex perceptual situations'. She adds, however, the mysterious qualification that, whatever the datum, it can always be "expressed in a proposition".¹

Miss Stebbing has also the foresight to endeavour to find a definition of inference which will cover both inductive inference and erroneous inference. Some modifications would seem to be required in the definition actually offered—'a mental process in which a

¹ This appears to be one of the few departures from the consistent usage of "proposition" for that which can be believed and which though itself expressed in a sentence cannot be said itself, in any natural sense of the term, to *express* anything whatever.

thinker passes from the apprehension of something given—the datum—to something related in a certain way to the datum'. This would cover the case in which the thinker passes from premiss to conclusion by mere association or guess work, where the required relation happens to hold—though it is not actually observed. Nor can we correct this by requiring the perception of the relation, since this would render 'invalid inference' a contradiction in terms. The remainder of the chapter discusses such important and well-selected topics as the epistemic and constitutive conditions of inference, the historically important allegation of *petitio principii* against the syllogism, and the distinction between 'entailment' and Mr. Russell's sense of 'implication'. This concludes Part I.

Part II. opens (Chapter XIII.) with a general discussion of *The Nature of Scientific Inquiry*, and in Chapter XIV. (*Induction: Enumeration and Analogy*) we are quite in the middle of things. This is a masterly chapter. It contains, among many other things, a compact and systematic presentation of many recent contributions to Inductive Logic—contributions from Mr. Johnson, Mr. J. M. Keynes and Dr. Broad.

But, however many the sources, the result is never a patchwork. The argument is continuous, and everything is in its predestined place.

There is one matter on which, for absolute clarity's sake, some restatement seems to be required. The problem is: Given two objects, S and N, does a given property of S also belong to N? We require to symbolise the total positive and the total negative analogy between S and N. In Mr. Keynes's symbols these are represented respectively by $p_1 p_2 \dots p_n$ and $r_1 r_2 \dots r_n$. The known analogy positive and negative may be symbolised by adding dashes to the members of the total analogy so far as they have been ascertained, $p_1', p_2', \dots, r_1', r_2' \dots$ etc. The properties known to belong to S, but not known to belong to N, may be represented by the letters $s_1', s_2' \dots$ etc. And similarly for those known to belong to N but not known to belong also to S, $n_1' n_2' \dots$ etc. The question can be restated: Does a given member of the s' -group, say s_1' , also belong to N? The answer in general is that this depends upon certain features exhibited in the collection of properties known, presumably upon features of all four groups. According to Miss Stebbing, the important feature is inter-connection between the properties known. But there are two important cases to consider, first, the connections between the properties $p_1' p_2' \dots$ etc. *inter se*; second, the inter-connection between this group of properties and the property s_1' , the possession or non-possession of which by N we are endeavouring to ascertain.

Miss Stebbing's comment upon Reid's argument for the inhabitation of the planets suggests that it is the interconnection of the members of the known positive analogy which renders the argument plausible. Surely, however, such interconnection is useless in itself.

Given a single property common to S and N, we do not strengthen the argument from analogy by enumerating all the other properties this common property implies. The vital point is that the common properties should in some way be connected with the property s_1' . But how, precisely? To say, as Miss Stebbing seems to say, that the property s_1' must be implied by at least one property in the positive analogy is to say much too much. Were even a single property to satisfy this condition we should no longer depend upon the argument from analogy. This, however, cannot be what is intended. What does strengthen the argument in the required way is the discovery that a number of the properties $p_1', p_2', p_3' \dots$ which are independent of each other are each implied by the property s_1' . The greater the number of such properties, which are important, not in the sense of *implying*, but in the sense of *being implied*, the stronger the argument becomes.

Chapter XV., on *Causality*, is crowded with most interesting discussions of all the most important questions. It would take a considerable amount of space even to enumerate the topics. On most of the issues raised there is scope for difference of opinion, but the author has a very sturdy sense for the reasonable side of the question. Perhaps the most serious difficulty that arises for the doctrines here preferred is one that relates to the distinction between the properties of a thing and the properties of its states.

"A thing", says Miss Stebbing, "does not have *primary characteristics*" (p. 267). Primary characteristics are absolutely determinate or specific. These characteristics belong only to the *states* of a thing. The contrasted, non-primary, characteristics of the thing are identified with Mr. Johnson's determinable characteristics which are non-specific, such as '*being coloured*'. Determinables and determinates are thus severed in a rather curious way—the determinables characterise things, the determinates characterise its states.

But among all the uncertainties infecting Mr. Johnson's distinction, one thing, it had always seemed, was clear: namely, the proposition that the fact that something is characterised by a determinate characteristic *entails* that precisely the same thing is characterised by the determinable. The fact that something is of a specific shade of red entails that it is coloured. Scarcely less certain is the proposition that the fact that something is coloured entails the fact that this same thing has some specific colour.

What perhaps may be said is that the sense in which a state is characterised by a determinable or a determinate characteristic is different from that in which the thing is so characterised. It would remain true, nevertheless, that in the sense in which either has one type of character it has in the same sense the other type.

Perhaps a further difficulty arises in connection with the causal characteristics which are said to belong to things, and which constitute a second species of non-primary characteristics. It looks as if we shall be led to say that whereas the thing has the determinable

characteristic of expanding when heated, only its states can have the specific characteristic represented by a determinate coefficient of expansion.

The general principles of scientific method occupy Chapters XVI. to XVIII. Priority of place is given to the subject of *Hypothesis* (Chap. XVI.) to the illustration of which Miss Stebbing brings to bear a wealth of detailed scientific knowledge. The whole subject is treated with the same freshness and thoroughness as characterises the rest of the work. Under the head of *Principles of Causal Determination*, Mill's Methods receive consideration. Writers on Mill and his 'Methods' tend either merely to repeat him, or merely to criticise him, or to try and patch his doctrines. Miss Stebbing keeps these three lines of treatment carefully distinct. When expounding Mill, she really tells us what he says. This done, it is then profitable to discuss how his formula can be improved. Criticism is restricted to issues that are important. This is precisely what the student requires.

Deductive Causal Determination and Functional Analysis (Chap. XVIII.) is another excellent chapter. It contains a useful introduction to statistics. Chapter XIX. concerns the application of scientific method to the Historical and the Social Sciences.

There is a short chapter (XX.) on *The Nature of Scientific Theories*, and Part II. of the volume closes with a return to fundamentals in the form of a discussion of *The Problem of Induction* (Chap. XXI.).

Miss Stebbing distinguishes two kinds of belief upon which the work of the scientist depends. The first she calls *postulates of scientific method*, the second *regulative principles*. The latter take the form of 'demands that nature must conform to certain conditions'—the demand for identity, persistence and continuity and the demand for simplicity.

A considerable amount of fresh air is let into the discussion of these regulative principles, but even so they remain somewhat mysterious. One is not perfectly satisfied of their *bona fides*, and of their right to associate with the dignified logical principles with which Miss Stebbing's work is principally concerned. Must we really recognise demands—however insistent—that Nature *must* be so and so, whatever the evidence, or lack of evidence, may be?

With regard to the demand for persistence, it would seem important, at any rate, to avoid the suggestion that man is born with innate expectations which would have been disappointed if all that he observed had been irreducibly chaotic. The conception of a permanent moon (as contrasted with early re-birth theories) is not wholly independent of empirical evidence. The fact that our friends continue to exist in the intervals that separate our meetings is at least suggested by the analogy of our bodies which are kept under practically continuous observation.

The demand for simplicity is rather more complicated—but is it necessary to interpret this in a way which implies any belief whatever about the constitution of Nature? It certainly also arises in

inquiries which are not concerned with actuality at all, in the construction of a logical calculus for example. It arises, too, chiefly in connection with *hypothetical explanations*. The important thing is that an *explanation* should be simple. All this is a consequence, not of any belief, but of the nature of our inquiry. What are the fewest unverified assumptions that will explain the given facts? We should ask this question even though we knew as an undubitable fact that Nature always goes to work in an unnecessarily complicated way.

The 'postulates of scientific method' are unquestionably in a different position. Propositions that assert that if Nature is constituted in a certain way induction is possible simply assert a logical fact, even though such a constitution of Nature is not a logical necessity. These principles, at any rate, incorporate no demand that Nature should be constituted in any particular way.

Miss Stebbing gives an excellent account of the present position with regard to this special problem. The chapter concludes with a discussion of *Hume's Problem and its Critics*. It was clearly intended, here as elsewhere, that the student should be left with something to think about.

Part III., as previously noted, is of the nature of an appendix—but by no means of the nature of an after-thought. These chapters are among the most valuable in the book. The chapter on the *Theory of Definition* includes the topic of classification and division, and an important section on *Definition and Analysis*. Chapter XXIII., *Abstraction and Generalisation*, contains an exposition of the method of extensive abstraction.

In Chapter XXIV. we find, in their proper place, topics commonly discussed in Chapter I. of "the text-books which run in the ordinary grooves". The last chapter of all contains an excellent little sketch of *The Historical Development of Logic*. Finally, the student is given a well-selected bibliography.

A word must be added by way of congratulation to Messrs. Methuen & Co. The symbolism has been very well set out, and the general format and typography are good. Some typographical errors have escaped correction—some unfortunately important; but these, no doubt, will disappear in later editions. We hope, and anticipate, that many will be required.

C. A. MACE.

The Faith of a Moralist. By A. E. TAYLOR. The Gifford Lectures, 1926 to 1928. Series I.: The Theological Implications of Morality. Pp. xx, 437. Series II.: Natural Theology and the Positive Religions. Pp. xxii, 437. London: Macmillan & Co., 1930. 15s. each.

It is far from easy to review Prof. Taylor's *Gifford Lectures* fairly and adequately in a reasonable space. I propose to devote my attention mainly to the first series and to deal very briefly with the second, because some selection or other must be made and this one

will include the subjects which are likely to be of most interest to readers of MIND.

The first series is entitled *The Theological Implications of Morality*. The question at once arises whether morality has any factual implications, theological or otherwise. Prof. Taylor begins by attempting to answer those who have objected to all arguments from value to fact as such. He calls this objection "the alleged rigid disjunction of fact from value", and he proceeds to attack it. The doctrine in question seems to me to be highly ambiguous, and Prof. Taylor does but little to clear up its ambiguities.

The form in which he originally states it (pp. 34 to 37) seems to be the following: "The fact that a certain state of affairs *would* be very good *if* it existed is not in itself any ground for believing that it does or will exist, and the fact that it would be very bad if it existed is not by itself any ground for believing that it does not or will not exist". Prof. Taylor then devotes the rest of the chapter to refuting forms of the doctrine which, so far as I can see, are different from, and have no logical bearing upon, the form stated above. Thus (1) he elaborately traverses the view that value is separable from existence in the sense that mere *subsistents*, such as universals, numbers, classes, propositions, etc., could have value. Again, (2) he refutes the view that value is separable from existence in the sense that the value of an existent is independent of its factual character. If anyone has ever held that value and existence are separable in either of these senses he was no doubt mistaken. But has anyone held it, and, if so, has it any relevance to the form of the doctrine which Prof. Taylor set out to refute? Then (3) he deals with the view that value and existence are separable in the sense that our awareness of and interest in values is a purely isolated human oddity which throws no light on the nature of the rest of reality. I notice that Prof. Taylor quotes McTaggart as an eminent exponent of the "disjunction of fact from value". Now McTaggart would quite certainly have agreed with Prof. Taylor in rejecting the doctrine in these three senses, whilst he asserted it in the form in which Prof. Taylor originally states it.

There are two further remarks to be made before leaving this question. (1) It is not really necessary for Prof. Taylor's main argument in this book that he should refute the "disjunction of fact and value" in the sense in which he states the doctrine on pages 34 to 37. For his main argument is of the Kantian form, viz., from the existence of a moral obligation to the existence of those conditions without which the obligation would be incapable of fulfilment. There is no doubt at all that this type of argument is *formally* valid, even though fact and value should be "disjoined" in the sense in which McTaggart asserted them to be. There is, however, an *epistemic* condition which must be fulfilled if such an argument is to avoid a vicious circle. There will be a vicious circle unless the person to whom the argument is addressed can know or

rationally believe that he is under the obligation in question *without already* knowing or rationally believing that the conditions which make fulfilment possible are actual. This seems to me to be the great practical difficulty about all such arguments as Prof. Taylor uses. Most people who doubt whether the *factual* conclusion is true will, for that very reason, feel a proportionate doubt as to whether they are under the obligation which is asserted in the ethical premise. And so there is a danger that such arguments can be used only in preaching to the already converted.

(2) The other point is this. In Chapter VII. (pp. 261 to 267) Prof. Taylor reverts to the "disjunction of fact and value", and criticises an argument of McTaggart's to the effect that there is certainly so much and so great evil in the world that no state of affairs, however bad it would be, can safely be pronounced impossible merely on the ground of its extreme badness. To this he retorts that, unless we assume at the outset an anti-theistic view of the world, we cannot be sure that the evils which we see may not be elements in, or causal conditions of, a far greater good. This is no doubt true. And it would have been a valid objection if McTaggart had used his principle to establish an anti-theistic *conclusion*. But he did not; he used it simply as an objection to a certain *mode of argument* which had been used to establish a theistic conclusion. And here McTaggart was plainly right, even when we admit Prof. Taylor's criticism. For, unless we assume at the outset a theistic view (in a wide sense) of the world, we cannot be sure that the evils which we see are *not* as great as they seem to be. We cannot even be sure that the goods which we see may not be elements in, or causal conditions of, far greater evils. The upshot of the matter is this. Arguments from the amount of good and of evil which we see to theistic or anti-theistic conclusions must be invalid, because we cannot conjecture what proportion the seen good and evil bear to the total good and evil except on the basis of some assumption, theistic or anti-theistic (in a wide sense), about the nature of the universe.

So much for the logic of such arguments as Prof. Taylor's. Let us now consider the argument itself. If I may state it in my own words, it seems to come to the following. Suppose we assume that each man's life ends with the death of his body, and that all the good and evil which he is capable of enjoying or producing must be confined to the earthly life of himself and other men. We need not take a low or narrow view of the possibilities which this assumption leaves open. We can still attach a high value to intellectual, æsthetic, and moral dispositions and achievements, and we can suppose that the race has a very long period before it during which it may win, for a time at least, far greater control than it has at present over its material environment. We can admit that a man would be under an obligation to sacrifice good which he might have enjoyed for a greater good to be enjoyed by others. But since, on this view,

the only possible goods are secular, it could never be reasonable to sacrifice a good except for some greater *secular* good. Now the question is whether we do not in fact consider it to be our duty to act in ways in which it would not be right or reasonable to act if the above assumption were true, and whether we do not approve of others for acting in such ways. It is plain that we attach a very high value to certain types of human character, and that such characters can be built up and maintained only by great pains and labour and at the cost of quite genuine and considerable sacrifices of other goods. If each of us be confined to his three score years and ten, the character which he has laboriously and with real sacrifice built up, and which we think he ought always to be striving to improve still further, is a bubble doomed to complete dissolution in a few years. Even before death it is likely to begin to degenerate through accident, illness, or senile decay. Again, if we sacrifice ourselves to improve the characters and conditions of future generations, each future individual is as transient as ourselves, and we have every reason to believe that after a time the material environment will inevitably become too unfavourable for any high form of life to continue. In fact, on the purely naturalistic view of human nature and destiny, every man who makes sacrifices to build up and maintain his own character or to improve the characters and conditions of future generations is embarking on the labours of Sisyphus and preparing for himself the disappointments of Tantalus. Yet it is held to be right and reasonable to behave in this way. Either the purely naturalistic view of human nature and destiny is false or the profoundest ethical convictions of the best and wisest men throughout human history are mistaken. And, if we are not prepared to accept the second alternative, we must accept the first.

I hope that this is a fair statement of Prof. Taylor's case. It seems to me that the disjunction which he offers us must be admitted ; but it is much less clear to me which of the two alternatives it is reasonable for us to accept in the present state of our knowledge. I am fairly sure that, if I were to put the case to my more intelligent pupils or to my younger colleagues in Cambridge, a large proportion of them would answer somewhat as follows. "The ethical ideals in which we were brought up were developed by men in societies where a non-naturalistic view of human nature and destiny was almost universal, and they were appropriate on such a view. Since then the cumulative evidence for a naturalistic view has become overwhelming, and it is now far more reasonable to suppose that the traditional moral ideals are inappropriate to our nature and situation than that the naturalistic view is false. No doubt this does make human life and human effort rather a sorry business, and no doubt the general recognition of this fact would tend to make most men slacker and more self-indulgent than they ought to be even on a naturalistic view. This may be a good reason for not proclaiming our convictions from the house-tops, but it is no argu-

ment against their truth. Our own wisest course is to try to exorcise, by psycho-analysis and similar means, the ghosts of those moral ideals which still haunt us from the dead past of our individual and racial infancy. We can then at least set about making the best of a bad job, undiverted by the lure of an impossible perfection, and untroubled by the stings of irrational remorse."

I do not say that I should accept the position outlined above. I think that a great many highly intelligent people at the present time have been "bluffed" into regarding a naturalistic view as inevitable by the real triumphs of genuine sciences, like physics and biology, and by the impudent pretensions of pseudo-sciences, like the various brands of "New Psychology". But I am sure that, if such an argument as Prof. Taylor's is to do more than impart a pleasing glow of self-satisfaction to the already convinced, it would need to deal very seriously and sympathetically with the position which I have crudely stated. I do not find any such attempt in Prof. Taylor's book, and this does seem to me to be a serious defect in it.

I pass now to matters of detail. There is a chapter devoted to *Moral Evil and Sin*, a subject which, Prof. Taylor thinks, has been treated too lightly by most philosophers and theologians. One point in this I will select for mention and criticism. As against those who say that the feeling of indelible guilt is "morbid" Prof. Taylor retorts that "morbidity" loses its meaning when applied to a feature common to all human beings. This is not at all obvious to me. Almost every human being has at least one severe cold each year, but this does not alter the fact that catarrh is a morbid condition. And I should have thought that Prof. Taylor himself and most theologians would have combined the views that sin is morbid and that it is common to the whole human race. No doubt it would be absurd to apply the adjective "morbid" to a feature which is *intrinsic* to human nature as such. But it is not absurd to say that each generation of human beings is born into an environment in which it is subjected to certain kinds of physical and mental infection which produce morbid effects on nearly all. To call a feeling "morbid" means roughly that it is inappropriate in quality or inordinate in intensity to the object towards which it is felt. I see nothing *absurd* in the view (whether it be in fact true or false) that the sense of indelible guilt is a morbid emotion which started in the irrational fears and groundless beliefs of our remote ancestors and has been conveyed to each generation in childhood by parents, nurses, and schoolmasters.

Before leaving this subject I would like to throw out the following suggestion for what it is worth. Is it altogether unreasonable to suggest that the higher flights of morality are as much the business of specialists as the higher mathematics? In any given society at any given time there is a certain level of moral achievement which may fairly be expected of every one, just as every Englishman at the present time may fairly be expected to be able to do simple

arithmetic without making gross mistakes. Anyone who falls below this standard may very properly feel shame and remorse. In each society and each period there will be certain moral specialists who have the desire and the power to rise far above this moral level, just as there are mathematical specialists who have the desire and the power to cultivate the higher mathematics. Such specialists will rightly feel shame and remorse if they fall below their own much more exacting standard. But the non-specialist in mathematics does not feel an indelible stain because he cannot rise to the mathematical heights of Einstein, and it is not clear to me that the non-specialist in morality does or should feel a passion of shame and remorse for not attaining the moral level of the contemporary specialists. No doubt the average moral level should be continually raised, just as the average mathematical level has been; and no doubt this is largely the result of the lives and works of the specialists in both cases. There are of course practical dangers in popularising this doctrine even if it be true. But that does not prove that it is false. And it is certainly arguable that at least as much harm has been done to morality by pretending that every one can and should attain to the level of the moral specialists as would be done by the general recognition that this is a mistake.

In Chapter VI., on the *Initiative of the Eternal*, Prof. Taylor argues that it is a "desperate problem" to explain how a man, being just what he is, can conceive an ideal better than himself and be drawn by it. An external stimulus is needed to start the process of self-transformation, and external help is needed throughout the process. This stimulus and support must come from a being who is the actual embodiment of the ideal to which we are always trying to approximate but which we can never reach. I cannot see that Prof. Taylor produces a conclusive argument for any part of this doctrine. (1) The statement that a man cannot get from himself the power to rise above his present moral level (p. 229) is presumably based on physical analogies, and derives from them such plausibility as it has. But even physical analogies are not wholly in Prof. Taylor's favour. The energy of a stream of water can be used to raise some part of the stream to a higher level than its source. Again, to take another analogy, though screws are now cut and surfaces are now planed by machines with an accuracy which the human hand cannot reach, yet the remote ancestors of these machines were screws which were cut and surfaces which were planed by human hands. (2) Can we say with any certainty that man, as he now is, has just such and such powers and no others? If man were known to be nothing but a particularly complex bundle of animal instincts and sensations, it would no doubt be a "desperate problem" to understand how he could take the first step in the disinterested pursuit of truth or beauty or virtue. But Prof. Taylor does not take this view of man. (3) Even if it be granted that the stimulus to a man's moral development must come from outside himself, why need it come from a being

who embodies the ideal which man seeks to attain? Is there any more need for that which initiates and sustains moral development to be an embodiment of the moral ideal than for the drivers of fat oxen to be themselves fat? (4) I have no doubt that the pursuit of moral perfection is greatly encouraged in most men by conceiving it as a life of loyal devotion to a person who is morally perfect. But I cannot see in this fact any guarantee that such a being actually exists and actually draws men to him.

Chapter VII. deals with the *Destiny of the Individual*. Prof. Taylor explicitly leaves out of account arguments for survival based on what he calls "the real or alleged facts of necromancy", and arguments from the alleged simplicity to the indestructibility of the human soul. Even if such arguments were valid (and Prof. Taylor thinks that they come to very little) they would give us no ground for believing in an ethically desirable form of survival. The same remarks apply to arguments based on the *consensus gentium* and on the prevalence of the wish for survival. The only kind of argument which is worth considering starts from the alleged fact that we are under an *unconditional* obligation to strive for something which could be realised *only* by an eternal being or one who is capable of becoming eternal. Now we are under an unconditional obligation to aim at becoming complete and free persons. Complete and free personality quite certainly cannot be secured in this life or in any mere continuation of it such as the alleged communications from the dead through mediums would suggest. But unless it were attainable we could not be under an obligation to try to attain it. So there must be a wholly different order of being into which we can enter after the death of our bodies. The positive character of this cannot be conjectured in detail; but we can say one negative thing about it with certainty. It will not be just "one damned thing after another", as our present life is, and as the Spiritualistic after-life would be. We can, perhaps, get some faint idea of it from certain earthly experiences, such as listening with rapt attention to music, or the feeling which follows a great self-sacrifice deliberately made at the call of duty.

I will make the following comments on this, for what little they may be worth. (1) I am not at all sure that the alleged obligation to aim at *perfection* is more than a rhetorical exaggeration (very necessary, no doubt, for the practical purpose of stimulating weak and lazy beings) of the admitted obligation never to rest on our oars or be content with our present level of moral achievement. So long as we are alive and in fair bodily and mental health we can always improve our characters further, and unless we constantly try to go forward we shall almost certainly slip back. Even when our bodily and mental powers are so decayed that further progress is impossible and actual retrogression is inevitable we can often delay the tragedy and impart a certain dignity to it by refusing to lower the standard. Unless the obligation to aim at perfection be

quite literal it will not bear the weight of the argument for eternal life which Prof. Taylor builds on it.

(2) Whilst I sympathise personally with Prof. Taylor's view that, if any great good is to be attainable, it must be enjoyed in a wholly different order of being from our present life, I feel uneasy on the following counts. (a) May not our conviction of the comparative worthlessness of the secular life, however much it might be improved in detail, arise from the fact that we view it from outside and are appalled at an endless vista leading to nothing? This, after all, is not the way in which those who are immersed in it are affected by it. At each moment they look but a short way ahead, and at no moment (so long as they are in fair health and not exceptionally unfortunate) do they want it to stop within the period which they then foresee. No doubt the skeleton in the cupboard of the secular life is the prospect of death. But, if the "alleged facts of necromancy" could be accepted at their face-value, this skeleton would be finally buried. I believe that if *in fact* each man had an unending continuance of much the same kind of life as he now enjoys there would be but few moments in this endless duration at which he would not wish that his life should go on. Certainly the vista of this endless and aimless continuance shocks people like Prof. Taylor and myself when we view it from outside. It would no doubt shock the plain man too if he could be made to view his life as a whole in this external way. But is it quite fair to condemn a certain mode of life, which at most moments has given tolerable satisfaction to most men who are living it, merely because it seems worthless when viewed from a quite exceptional standpoint which a few exceptional people take at a few moments in their lives? It is idle to quote Horace at us in this connexion. What troubled Horace was the prospect of growing old and eventually dying. If the "alleged facts of necromancy" had persuaded Horace that he would take up much the same kind of life after death, with rather better Falernian and still more amenable boys and young women, I am convinced that he would have faced the prospect with admirable fortitude. (b) When we assert that to enjoy the beatific vision is man's greatest good, is there not a danger that we may be generalising from the tastes and capacities of a few very exceptional men to mankind at large? Prof. Taylor's musical analogies will serve to illustrate my meaning. Musicians no doubt do derive a high and exquisite happiness from listening to great music well executed. It may well be that this kind of happiness is greater and better than any that the non-musical can enjoy. Still, to the vast majority of men a concert of classical music would be a very fair earthly foretaste of Purgatory, to go no further. Frankly I find it hard to believe that more than a tiny proportion of men would be capable of experiencing the beatific vision, or would view the prospect of an eternity occupied in it with anything but horror, unless they were so radically transformed by death as to be no longer themselves. (c) Even if I assent to the doctrine that an eternity of beatific vision would be the highest good

for me, I am not sure that my assent has not been gained under false pretences. The fact is that I am well enough acquainted with temporal goods to see that they all have great drawbacks. By definition *these* defects would be absent in the beatific vision. But it might well have other defects of its own which I fail to envisage only because I know so little in detail about it. The defects of temporality, like those of representative government, are familiar to all of us, for we were all born and bred under it. For the same reason its merits tend to be taken for granted. We tend therefore to idealise eternity and autocracy, which at least are free from the old familiar ills. But autocracy has its castor-oil; and the denizens of eternity, if such there be, may for all we know have troubles of their own which do not affect the creatures of time.

(3) It seems to me most surprising that philosophers and theologians should dismiss the "alleged facts of necromancy" so lightly as they do. After all, they are the *only* shred of empirical evidence that we have to set against the enormous mass of facts which suggest with overwhelming force that the human mind is wholly dependent on the visible human body and perishes with the latter. And, if the kind of after-life which they suggest be as depressing and degraded as Prof. Taylor and other theologians allege, surely it is the business of Theists to face these facts and not to turn a blind eye to this very embarrassing lion in their path.

I pass now to Chapter VIII., called *Other-worldliness*. This is largely devoted to discussing the doctrine that the other world is this world rightly understood. The most important point in it seems to be the doctrine of "patterns". The world, we are told, is a pattern whose elements are sub-patterns. These all resemble the world-pattern to some extent, and some do so more than others. To discover the world-pattern we must take account of all sub-patterns open to our inspection, and even then we shall discern it only vaguely. The higher sub-patterns will throw more light than the lower ones on the world-pattern, and the lower sub-patterns can be understood only as elements in the higher ones.

In all this there seems to be a fundamental assumption which is far from self-evident. It seems to be assumed that the world-pattern must be the highest of all patterns. But why must this be so? Is it not possible, and in accordance with most of the appearances, that some kinds of unity *within* the world (e.g., human minds and certain human societies) are much more intimate and complex and have much greater intrinsic value than the pattern *of* the world as a collective whole? The unity of the latter has all the appearance of being very loose indeed and of not rising above the merely geometrical and physical level.

In Chapter IX, on the *Goal of the Moral Life*, Prof. Taylor discusses the contention, most strongly pressed by Bradley, that the life of moral effort aims at a state in which, if it were ever reached, morality could have no place. To this Prof. Taylor answers by drawing

a distinction between progress *towards* good and progress *in* good. Morality is not essentially a struggle against evil. Even though all positive evil were eliminated from one's character and circumstances there would still be room for endless progress to greater and greater good. (Compare, e.g., the fact that a man who had got rid of all error and illusion might still perpetually increase the range and depth of his knowledge.)

On the main point Prof. Taylor seems plainly right here, and it is merely a verbal question whether the name "morality" should be confined to the stage at which there is still a struggle with positive evil. Two points which are not merely verbal remain. (1) Granted that good does not simply *consist in* fighting with and overcoming evil, is it safe to assume that good could continue to exist and flourish when deprived for ever of the *stimulus* of evil? Anyone who answers this in the affirmative is making a very bold step beyond anything for which we have empirical evidence. (2) Does not mere limitation of knowledge almost inevitably lead somewhere or other to positive error? And, if so, may not mere limitation of goodness always involve some positive evil?

It remains to notice very briefly the contents of the Second Series. The question which Prof. Taylor is discussing throughout this is the following. Are the historical, and apparently contingent, elements, which in fact are contained in all the great religions and which have commonly been thought by the followers of those religions to be of vital importance, really essential? Or are they embarrassing excrescences which might be shed with advantage at the earliest opportunity? This is a quite general question which falls well within the terms of the Gifford Bequest, though it is more pressing for Christianity than for any other great religion, since the nature and life of its founder are an integral part of the Christian doctrine of God, man, and the world. After a general statement of the problem (Chapter I.), Prof. Taylor discusses in turn the following questions: Alleged special revelations (Chapter II.), alleged historical events (Chapter III.), alleged miracles (Chapter IV.), the meaning and place of authority (Chapter V.), religious institutions (Chapter VI.), religious sacraments (Chapter VII.). The book ends with two more general chapters, one on *Time and the Historical*, and the other on *Faith and Knowledge*. There is also an Appendix in which Prof. Taylor adds notes on *The Rationality of the Universe*, *Freedom and Contingency*, *Contingency in Nature*, and *Free Will of Indifference*.

Prof Taylor seems to me to argue quite convincingly that, if God exists, it is not antecedently unlikely that he should make revelations at particular times to particular persons, that these revelations might occur in connexion with different religions whose doctrines in part conflict, and that they might convey information about God which could not have been reached by reflexion on facts which do not include the content of the revelation. Any alleged revelation, even if genuine, will almost certainly be coloured by the

personal, local, and temporal peculiarities of the recipient, and it must be gradually purified by subsequent analysis, comparison, and reflexion. The ultimate test is that it should contain something new and unforeseeable, and yet that this new feature should be found to fit in with and to be an harmonious development of the existing religious experiences of mankind.

Prof. Taylor's discussion of the historical element in religion in general, and in Christianity in particular, seems to me to be admirably fair and sound. On the one hand, Christianity with Christ converted into a myth or supposed to have been merely a man would cease to be Christianity. On the other hand, Prof. Taylor admits how little we really know or can conjecture with reasonable probability about the man Jesus from the very scanty records which are available. A Christian must believe that Christ is alive and active, but this does not tie him down to accepting the details of the resurrection or the subsequent appearances as recorded in the Gospels. Both traditionalist theologians and historical critics of tradition are apt to make different but equally unjustifiable forms of the same metaphysical assumption. The former assume that we know all the details of how God has disclosed himself in the past; the latter assume that we know fully and exactly what types of event are and what are not possible.

In the discussion of miracles I also find very little to disagree with. Prof. Taylor makes two important points which are essential to any reasonable discussion of this subject. (1) With regard to any alleged miracle there are always two different questions to be asked: (a) Did the event described in fact happen? (b) Was it a "sign" in the religious sense? Even if it certainly happened it can never be conclusively proved to be a "sign" by evidence which would be equally cogent to the religious man and the atheist. (2) The first question must be answered in the light of historical evidence which is equally open to the religious and the irreligious. But even so the final probability will depend in part on the antecedent probability, and this will be very different according to whether one takes a naturalistic or a non-naturalistic view of the world. And even those who agree that Christ was a supernatural being might legitimately differ in opinion as to whether it is or is not antecedently likely that unusual and to us inexplicable events will be associated with such a being. Prof. Taylor himself inclines to the former view, but his discussion of the whole matter is admirably balanced and temperate.

Prof. Taylor points out that it is essential to distinguish between *authority* and the claim to *infallibility*. Authority is essential, not only in religion but also in science. And in morality the individual conscience is authoritative, though it is certainly not infallible. But persons and institutions who may rightly claim authority have a very strong tendency to slip from this into claiming infallibility. This error is certainly not confined to religious authorities; indeed I should think that in modern times the most extreme and ludicrous

examples of it are to be found in the pontifical pronouncements of the trades-union of the medical profession. Even if a church possesses a deposit of revelation which, as coming from God, must be absolutely true, yet it will always be mixed with human interpretation. And no-one can decide infallibly just where the kernel of absolute truth ends and the husk of human interpretation begins.

As regards Institutionalism Prof. Taylor remarks that what the ritualist values is not magnificence, as such, but formality. The antithesis to this is not simplicity but spontaneity. Some degree of convention and ritual is essential in all departments of social life, and there will necessarily be much in any form of worship which will repel individual worshippers. But we must allow for the needs of people who are at a lower intellectual or artistic level than ourselves, and we must remember that the same form may cover a great variety of individual attitudes of mind.

In bringing this review to an end I must remark that much of the value and interest of Prof. Taylor's book is to be found in the long digressions which he constantly makes. These do, indeed, seriously interrupt the main argument, and I have ignored them completely in the present notice. But they contain many of Prof. Taylor's most original and ingenious reflexions on all manner of subjects, and they are replete with the astonishingly wide and deep learning which he pours into all his writings.

I have noticed the following misprints. In vol. i., on p. 393, line 8, for *dismiss* read *discuss*. (I am inclined to think that on p. 76, line 6, *notion* should be substituted for *motion*.) In vol. ii. are the following. Page 22, footnote, line 2, for *squares* read *squarer*; p. 84, footnote, last line, for *Noboddady* read (I think) *Nobodaddy*; p. 152, note 3, and p. 153, note 1 should be interchanged; p. 167, line 26, for *act* read *set*; p. 229, note 2 should come after note 1 on p. 228; p. 298, last two lines, for *physical* in the last but one read *psychical*, and for *psychical* in the last read *physical*; p. 311, line 26, for *It is* read *Is it*.

C. D. BROAD.

The Nature of Living Matter. By LANCELOT HOGBEN. London: Kegan Paul, 1930. Pp. 316. 15s. net.

THIS is an extremely clever book, quite one of the cleverest books of its kind that have been written by an experimental biologist. Apart from its forcible and beautifully clear style, and the breadth of interests it shows, its cleverness lies in the extraordinary skill with which the author has succeeded in anticipating and disarming criticism. It would be easy for an unsympathetic and unscrupulous critic to misrepresent the author by quoting extracts without also giving the author's own "antidotes" to them. Consequently it is not easy to give a faithful representation of Prof. Hogben's position, still less to convey the peculiar literary merit of the book, in a few

words. It is one of the author's merits that he does not fit comfortably into contemporary categories. It would, for example, be a gross misrepresentation to call him a behaviourist, although behaviourists might well claim him as a prophet, and would be hard put to find a better one. The book is dedicated to Mr. Bertrand Russell, and the author makes Mr. Russell's distinction between "private" and "public," and the notion of "ethical neutrality," the central ideas of the book. If Prof. Hogben is to have a label, "Publicist" would perhaps be the best that could be found. The position he wishes to urge has much in common with that of Mr. Russell's *Outline of Philosophy*, the differences between the two works being chiefly dependent upon temperamental differences between their authors, and on the fact that one is a biologist and the other is not. Moreover (and this increases the reviewer's difficulties), the present work does not profess to be a systematic one. It is a collection of essays very skilfully knit together by the central ideas above mentioned.

It may be useful to point out certain general clues which should be borne in mind in reading the book. In the first place, the author belongs (as he himself is fully aware) to the extreme extravert type. With this is correlated a strong dislike and distrust of deductive reasoning. In one of the later essays there is a passage (p. 206) which is highly characteristic of the author's method. He says: "The Roundheads realised that transcendental ethics cannot be made the subject of argument. They acted intelligibly on the assumption that the only answer to the Divine Right of Kings was to make a spectacle of the head of Charles Stuart to Gods and men." In the same way Prof. Hogben does not make his major issues the subject of argument; he cuts off the head of criticism by simply affirming the results of modern experimental inquiry, and by denying rival affirmations. Modern natural science illustrates to perfection Mr. Bernard Shaw's definition of a miracle as "an act which creates faith." Prof. Hogben is perfectly satisfied with his faith, and cannot understand how philosophers can be interested in examining its grounds. This psychological peculiarity seems to have prevented the author from seeing that his attitude to deductive reasoning should, in consistency, have led him to reject the use of pure mathematics in natural science, which he is far from wishing to do. It is here that the disciple departs from his master, for he refers to Mr. Russell as "an impenitent advocate of *a priori* reasoning in his capacity as a mathematician," and he is quite untroubled by the epistemological problems which Mr. Russell discusses. In fact Prof. Hogben avoids any real discussion of these difficult problems. He does not do sufficient justice to the fact that scientific notions and procedure have only attained to their present clarity and familiarity in the course of a long history, during which they only gradually became "public," as a result of much hard intellectual labour, and not merely through appeals to experiment. Consequently he does

not appear to realise the extent to which much that is necessary for carrying out the fundamental postulates of science is assumed and not observed. On page 235 he says: "In Aristotle's system science does not beg for a philosophical sanction. It was reserved for the piety of Descartes to introduce the singular idea that the scientist requires a licence to practice signed and stamped by the metaphysician," and that "Descartes attempts a justification for the growing confidence of mankind in the testimony of the senses." This is sheer caricature. The confidence of mankind in "the testimony of the senses" has never been at the disposal of philosophers, and the latter have never held that the *practice* of science required any such justification. But the author does not distinguish between investigation and interpretation, and never explains what he means by the "testimony of the senses." He himself says, on page 280, that "in text-books . . . it is usual to describe the path of nervous impulses from the skin to the spinal cord and thence to the muscles, as if the reflex arc were something which is evident to inspection." Moreover, when, on page 168, he says that "It is just those propositions which every one accepts that the scientist is most anxious to examine in the hard light of experience," he forgets, or is not aware, that there are propositions which all scientists accept, which are presupposed in every appeal to experiment, and which it is the business of philosophy to examine. Prof. Hogben has fallen a victim to the extravert's difficulty of recognising *any a priori* element as underlying natural science. He does not seem to have appreciated the difference between the modern and the traditional attitudes towards this question. He seems to suppose that the old antithesis between Rationalism and Empiricism still has its traditional meaning and clear-cut character, a mistake which could have been avoided by reading Mr. Russell's *Problems of Philosophy*. In consequence of this the author is not entirely free from that false scientific empiricism which, according to Prof. C. I. Lewis, is "now happily obsolescent." It is easy for Prof. Hogben to quote examples, both from science and philosophy, of the unfortunate consequences of the misuse of deductive reasoning (or "Hegelian reasoning" as he also calls it). But he seems to suppose that the defects of those who have misused it belong also to the instrument itself, and uncomplimentary epithets which might justly be applied to the former he extends also to the latter. For this reason the remarks about Weismann in this connection seem to have missed their mark. It was just because Weismann was clear-headed enough to work out the logical consequences of the biological premises current in his time that later investigators were able to apply the experimental test, with results which led them to re-examine the premises. Weismann, in the face of experimental contradictions, made the mistake of bolstering up his argument with accessory hypotheses, instead of doubting his premises.

This leads to a second general characteristic of the book which

the reader should bear in mind. The author explains in his Foreword that the book has grown out of a discussion at the 1929 meeting of the British Association in which, with General Smuts, Dr. J. S. Haldane and Dr. Wildon Carr, he took part. In consequence of this the criticisms of philosophy which form one main current of the book are chiefly directed against the speculations of these three authors. In conformity with his psychological type Prof. Hogben has a strong dislike for speculative philosophy, which he calls indifferently "moral philosophy," "transcendental philosophy," and "introspective philosophy," the chief business of which he supposes to consist in an attempt to effect a reconciliation between science and religion. Philosophy is thus depicted as the last refuge of obscurantism. Philosophers will be able to take care of themselves, but from the standpoint of the scientific reader this failure to understand the scope and nature of philosophical inquiry will only have the unfortunate effect of confirming an already deeply rooted misunderstanding of the respective rôles of philosophy and natural science.

But these remarks about its chief defects will give no just notion of the merits and content of the book. The essays are distributed among three Parts. Parts I. and II. are chiefly biological. Part I. deals with the evergreen controversy between vitalism and mechanism. On the whole Prof. Hogben's treatment of this topic is along familiar lines. His criticisms are very largely directed against a remark in Dr. Haldane's Gifford Lectures about "the characteristic peculiarities of conscious behaviour." He reproaches Dr. Haldane with having omitted to mention Pavlov's researches on conditioned reflexes, which he regards as of immense importance, not only in physiology, but also for philosophy. But from the purely biological point of view this development simply means that physiologists now have a clearer understanding of the proper scope of their science, and, thanks to Prof. Pavlov, are provided with a technique for investigating the higher levels of the central nervous system. "Conscious" is no more a *physiological* predicate of behaviour, than "voluntary" is a *histological* predicate of a certain kind of muscle. It is surely as impossible to discriminate between conscious and unconscious behaviour by purely physiological methods, as it is to discriminate between voluntary and involuntary muscle by purely histological methods. In fact these are muddled terms, being merely the outcome of the customary carelessness of biologists regarding matters of terminology. And if it is a reproach against Dr. Haldane that he omitted a reference to Pavlov, it might also be urged against Prof. Hogben that he does not mention the newer ideas of Köhler, Lapique, P. Weiss, and Detwiler, which, whatever further implications they may have, do suggest a departure from the older anatomical or "telephone-exchange" attitude towards the central nervous system. Moreover, in all his remarks about "introspective psychologists" (which are coloured by the extravert's characteristic dislike of such matters)

the author does not mention the various schools of psychological medicine which, while claiming to be "scientific," do not disdain to use "introspective" methods. As regards the supposed philosophical consequences of modern neurology, Prof. Hogben seems to believe that the latter furnishes a refutation of Kant's doctrine of space and time. He makes no reference to the fact that the necessity for the Kantian "pure intuition *a priori*" was removed by the work of the geometricians of the last century, but seems to suppose that modern philosophers are still committed to Kant's doctrine. These references to Kant are perhaps accounted for by the fact that Dr. Haldane makes the same mistake in his Gifford Lectures, and treats the views on these topics which were current at Oxford in his student days, as though they were representative of present day opinion. These circumstances seem to be responsible for a certain amount of flogging of dead horses in Prof. Hogben's pages. But the statement on page 310 that "The educational practice of Madame Montessori can throw more light on the origin of the concept of *number* than Kant's discussion of the proposition that seven and five make twelve," suggests that the author has not succeeded in distinguishing between the logical and psychological issues involved.

The vitalism *versus* mechanism controversy thrives to a very large extent on the extreme elasticity of the term "mechanism," and on the diversity of interests among the combatants. Prof. Hogben is too penetrating not to appreciate this. But it is very easy to overlook the contractions and expansions which the term "mechanism" may undergo, and consequently in places the author may suggest that he is giving his assent to a form of mechanism which is unduly restricted from the biological point of view, and may mislead readers who do not appreciate the subtleties of the situation so well as he does himself. Part I., at least, might easily give the impression that the author favours a very conservative attitude towards biological methodology, and that he is underestimating the differences between the organic and inorganic realms, and the consequent differences between the biological and physical sciences. But when we reach the admirable essay at the end of Part II., entitled "The Survival of the Eugenist," we read as follows: "This attitude starts from an examination of those characteristics which man shares with all other animals, but neglects the equally important task of defining those characteristics which distinguish man from all other animals. The weakness of all mechanistic systems hitherto proposed lies in their refusal to recognise the existence of anything which does not yet come within the province of scientific method." Now, from the purely biological standpoint, it is very difficult indeed to see why these remarks do not apply with equal force, *mutatis mutandis*, to the relation between organisms and the inorganic world. It has always been the chief defect of mechanistic writers to make the most of those characteristics which organisms share with inorganic things,

and to neglect the equally important task of defining those characteristics which distinguish them. It is for this reason that we have no such definitions unless we look for them in the vitalistic writings, in which they are mixed up with much that is irrelevant for scientific purposes. It is easy to see that the mechanists have been goaded into the one extreme by the extravagances of their opponents, but neither side is wholly innocent of allowing its attitude towards the methodological issue to be coloured by its metaphysical predilections. Consequently the mutual relations of the biological and physical sciences are never discussed impartially, and the early development of biology has been overshadowed by a constant reminder that it must reduce itself to physics and chemistry. And yet, this curious suicidal mania on the part of orthodox biologists seems to have little more behind it than the speculations of such writers as Herbert Spencer in the last century. On page 278 Prof. Hogben says that "biology being a young science with a far greater diversity and complexity of subject matter, is less fitted to demonstrate the essentials of scientific reasoning than a more firmly grounded, older and more exact branch such as physics." But this is chiefly because, on account of their horror of "deductive reasoning," and the widespread belief that biology is not an "independent science," biologists have never taken the trouble deliberately to formulate the fundamental principles of their science. The Mendelian theory is perfectly fitted to 'demonstrate the essentials of scientific reasoning,' and is entirely independent of physics or chemistry as such, and could perfectly well have been arrived at if Galileo and Boyle had never lived. These circumstances also seem to be responsible for the rather too easy way in which Prof. Hogben brushes aside the notions underlying "holism," better known among biologists as "organicism." And this again is understandable when we remember that so little attempt has been made, by those who advocate this point of view, to work it out in a form which can have any direct bearing upon biological science, chiefly because they are more interested in its supposed metaphysical consequences. On page 110 the author says: "We have seen that the ultimate non-biological constituents of living matter, molecules, atoms, etc., do not behave differently when united to form a living system." Bearing in mind that biology is a "young science" we are hardly in a position to say that "we have seen" this. It would be more correct to say that "it has always been the custom to assume" it, and that in physiology at least (although this is denied by Dr. Haldane) there has so far been little occasion to assume the contrary. The author does not explain in what sense molecules are to be regarded as more "ultimate" than cells, nor does he see that the notion of "living matter" has been rendered obsolete by modern research. The question is not in fact so simple as he seems to suppose, as he would have realised had he taken the data of modern experimental embryology into consideration. But these are purely biological matters of little concern to philosophy.

The essays forming Part II. are chiefly devoted to evolutionary topics, and include much excellent critical discussion of the speculations of the last century which is of general interest. The only general criticism which suggests itself here is that in his enthusiasm for the modern experimental outlook the author has not quite done justice to the older morphologists. Much of their laborious work is of permanent value, although their theoretical interests were too exclusively historical. That is to say they were primarily interested in questions about the history of organic races which can properly only be answered by means of fossil data. But they made the mistake of supposing that genuine historical information could be obtained by a backward extension of inductive knowledge obtained from recent organisms. Haeckel attempted to do this by means of his "biogenetic law." It was for this reason that morphology degenerated into a hunt for phylogenies and fell into disrepute. But there is an analogous danger of misusing experimental data in the same way. Morphology has been not so much reformed as forgotten by the diverting of interest into experimental channels.

In Part III. the author develops his doctrine of "Publicity" in relation to humanism, religion and education, upon all of which subjects he has much of value to say. It would be impossible to do justice to this part of the book in a summary, and it hardly admits of discussion. One either agrees or disagrees. It only remains for the reviewer to say that Prof. Hogben's vigorous treatment of these topics merits the attention of all who are interested in them. The author has high hopes that his doctrines will promote the future peace of the world by providing a basis of agreement, while relegating topics upon which agreement cannot be reached to the plurality of private worlds. But he himself says (p. 243), "The period in which we live is one of ferment and disintegration. In its impetuosity to settle the problems of human conduct, it will not be content to await the slow growth of science." Moreover, the differences between the extravert and introvert types appear to be irreconcilable along this author's lines, and are by no means confined to æsthetic and ethical topics. Even within the former group a deep cleft separates the behaviourists from the geneticists. It is difficult to see how these antagonisms can be overcome except by an ultimate appeal to that very "rationalism" which the author repudiates.

J. H. WOODGER.

Some Problems in Ethics. By H. W. B. JOSEPH, M.A. Oxford: at the Clarendon Press, 1931. Pp. vii, 136. 5s.

ON page 26 of this most stimulating and important little book we are told that "a right act, some say, is not to be defined as one causally related to what is good: and it may have no value in itself; nevertheless I ought to do it. In spite of the arguments by which this opinion has been defended it seems to me absurd."

The thesis here controverted is Mr. Prichard's in his *MIND* Article (1912) and in his Inaugural Lecture, *Duty and Interest*. Accordingly, one of Mr. Joseph's principal aims is to show that Mr. Prichard's theory of these matters is absurd—although, of course, the kind of absurdity that is worth writing a book about. A second purpose is to deny the adequacy of the "causal" theory of rightness, together with certain other views set forth by Mr. Moore in his *Principia Ethica*. A third purpose which insinuated itself recurrently into both of the former, and which, as we learn from the Preface, originally set Mr. Joseph's pen in motion, is this author's desire to investigate more thoroughly than is usual the intricate ethical problems connected with obligation. And Mr. Joseph's fourth object is to offer suggestions towards a tenable theory of these questions. I shall try to deal with these points *seriatim*.

(1) According to Mr. Prichard, an act must be right if it is ever our duty to do it *because* it is right, and this, he contends, implies that right acts should be performed simply because they are what they are, and further implies that there is an ultimate distinction between "right" and "morally good" acts. A right act is simply an act which, being voluntary or in our power, is right: a morally good act is one which, being right, is done from a sense of duty. This motive makes the act good, but cannot make it right; and since "motives" are not in our power to summon at will, action from a good motive cannot be a duty, because duty or "ought" implies "can."

Against this view Mr. Joseph contends, in general, that there can be no obligation to act in a way that is in *no* sense good (one wonders *why* it could, or should, be *good* to act for the sake of a rightness that is *not* good), and also attacks Mr. Prichard's position more in detail. His main specific arguments appear to be (a) that any act that can conceivably be called right must be chosen, purposed and intended, and therefore must include the "motives" that Mr. Prichard illegitimately extrudes, so that, if A pays his debts to please a creditor, and if B pays his debts to avoid proceedings in the courts, we must call these *different* "actions," and not, as Mr. Prichard would say, the same "action" with different motives irrelevant to the rightness of each. Again (b) Mr. Prichard has overlooked the circumstance that if we *do* have, say, generous impulses, it may be our duty to be moved by these motives, and he has also overlooked the fact that, in addition to moral action of this sort (which need not invoke the sense of duty) there are many intermediate cases in which, often against troublesome inclinations, we admit and act upon an obligation "to realise a goodness connected with the particular principle of the action which is recognised as my duty now" without being moved by the *general* principle of the moral law for its own pure sake. Here our specific relation to some "goodness" in a specific situation determines the obligation, and Mr. Prichard is mistaken in supposing that an infinite regress is implied. *Any* self-realising process is in a way

self-reflective; but we are not committed to the absurdity of holding that such right actions = "to be obliged, by a certain thought, to be obliged by a certain thought. . . ." Moreover (c), Mr. Joseph contends that the "sense of duty" is a "motive" of quite a different order from, say, generosity or affection; and lastly (d) that Mr. Prichard is quite wrong in denying that there is a general form or character in virtue of which all right acts are right, and so in condemning himself to the acceptance of an unconnected heap of right acts, or classes of acts, about whose rightness nothing more can be said.

Commenting upon this very brisk discussion (dogmatically, I regret to say, because I have to be brief), I should like to remark that Mr. Prichard's view (which professes great obligations to Kant) is, in reality, outrageously un-Kantian. For, surely, Kant maintained that, *because* we are rational beings, it is *always* in our power to determine our action by the law's pure rationality (cf. Abbott, p. 118); that such pure rationality *does* settle the very meaning of rightness; that it is *good* (indeed the only unconditional good, being the very form of the good will); and, consequently, that there is all the difference in the world, or even outside it, between this rational "motive" and the "pathological" *springs* which need not be at our command. (It is true that Kant's position is complicated by his odd doctrine of "respect"; but Mr. Joseph explains the point (pp. 131 *sq.*) as well as seems necessary.)

No doubt an ethical view may be true, although it is thoroughly un-Kantian. Indeed, it would seem to me that, granting an action to be responsible in the sense of subject to the control of reflective principle, it is absurd to say that our duty must be done *consciously and expressly* for the sake of the law. The important point is that the law within us *would* justify it *if* we examined the point of principle. And I could have wished that Mr. Joseph had gone into this matter. Nevertheless we should, I think, be very grateful to him indeed for the point he did go into, that is to say the sense in which we may honourably fulfil certain specific obligations without being actuated by the *general* sense of duty at all. For this entire question has been far too infrequently discussed.

I think, further, that Mr. Joseph has demonstrated the untenability of Mr. Prichard's rigid distinction between acts and motives, although, too often, he seems to me to suggest unwarrantably that a Prichardian "act" (if there could be such a thing) would be a mere physical movement. This does not follow at all. To illustrate from one of Mr. Joseph's excellent examples (with another purpose), there is surely something more than physical movement in the instances (α) of A securing a competence for selfish reasons, which competence A's trustees devote, on his death, to the education of his son, and (β) of B's securing a competence for the sake of his son's education. For that matter, there might well be a common piece of living in the two instances, since neither A nor B, while engrossed

in business, need be supposed, in general, to think of anything but the business in hand. Nevertheless Mr. Joseph seems to me to be entirely correct in maintaining that our actions are either amoral, or else moral in virtue of pursuing a purpose which is subject to moral principle, and that any relevant difference in this respect implies a different *action*.

Finally, in this connection, I should say that while I suspect Mr. Joseph's argument, in the form in which it is stated, to be, sometimes at least, a *petitio* (e.g., p. 33 and p. 59)—since he seems to assume that goodness *alone* determines obligation, or, again, that a common form of rightness must be a species of goodness (which is just what is denied by those who hold that *right* justifies quite independently of *good*)—I should agree that *it is* absurd to say that any right act is not good (although such an act need not, of course, conduce to the agent's pleasure or to the pleasure of others, or, again, to material interest), and that since this is true, it seems wanton extravagance to look beyond good for the justification of action unless we really are compelled to do so.

(2) Against Mr. Moore, Mr. Joseph argues (a) that "good" is not a "quality" but a "form"—he sometimes says a "character"—and (b) that the rightness of any action cannot be correctly determined in terms of its (probable) future benefit. Since these criticisms are intended to lead directly to constructive counter-suggestions, I had best defer consideration of them. I may remark, however, regarding the second of them, that while I think Mr. Joseph's conclusion sound, his examples seem very inconclusive (that on p. 94 is admittedly so); and also that if Mr. Joseph's discussion either of hedonistic or of "ideal" utilitarianism had been at all adequate, his own definition of "action" would have compelled him to draw distinctions very similar indeed to those he drew regarding non-utilitarian theories. For there are clear distinctions, highly relevant to ethics, between (a) an action *intended* to produce future benefit and done for that purpose, (b) a different action (because intended for some other purpose) which is likely, nevertheless, to produce unintended benefits, (c) the action of inanimate agents, like wind and sun, which may be likely to be beneficial.

(3) I hope I have been able to indicate how closely Mr. Joseph's arguments are connected with his original design of analysing obligation; and the delicacy of his observations in this domain is frequently very delightful. I must confess to a doubt, however, whether his statement on page 61, "Obligatoriness is not a character of actions. To say that an act is obligatory means that the doing of it is obligatory on me" is really true of actions in *his* sense, however true it may be of actions in Mr. Prichard's sense. And I think Mr. Joseph's exposition is rendered unnecessarily difficult by his acceptance of the ambiguity expressed in the sentence (p. 104): "There is a rightness in right actions distinguishable from our obligation to do them, though the latter is also sometimes meant by calling them right."

(4) Mr. Joseph's negative argument is crystallised in the following statement: "There are some actions which we think we owe to do, or the thought of which obliges us, but in which we apprehend no goodness to make them right, so long as we look only to them; nor can we find it by looking to their effects" (p. 97); but he affirms that if good is a "form" and not an isolable quality to be found in particular acts or sets of acts, we are able in principle to overcome the difficulty, on the general lines that this form is structural instead of being the property of items, and that it implies a pervasiveness and a comprehensiveness (or at least an adumbration thereof) that seems to fit the continued purposiveness of a continuing society of persons.

It seems clear that his argument does point in this direction, and that if the claims of duty are to be accepted at (even approximately) their face value, it is necessary to attend to relational or structural values as well as to the intrinsic values of isolable events or experiences. And the tentative and candid way in which Mr. Joseph puts his point (and endeavours, incidentally, to defend Plato and T. H. Green against the strictures contained in *Duty and Interest*) disarms criticism. I cannot help thinking, however, that his account of the difficulty (on his theory) of finding a place for the goodness of "unfortunately very uncomprehensive" simples such as "some pleasures, sounds, scents" is scarcely adequate. He argues that a hypothetical outside observer could not call a world good if it consisted of beings "just sufficiently conscious to feel pleasure; not conscious of one another, nor of anything at which they were pleased," in order to show that the connection with spiritual activity is essential to the "form" even of a good pleasure. But what would the outside observer say of the converse case of dull, dumb, uncomprehending misery, or, for that matter, of acute uncomprehending agony? Would he seriously affirm that all this misery was to be regretted, if at all, only because it was "unspiritual"? And if he did, how many of us would believe him?

JOHN LAIRD.

VII.—NEW BOOKS.

A Monument to St. Augustine: Essays on Some Aspects of His Thought Written in Commemoration of His 15th Centenary. London: Sheed & Ward, 1930. Pp. 367. 12s. 6d.

SOME one has called St. Augustine the "first modern man"; others have spoken of him as the real "founder of Roman Catholicism". No doubt, there is a touch of journalistic exaggeration in both these phrases. It is not altogether clear what the former of them was intended to convey; so far as I grasp its meaning, I doubt its accuracy; I am not at all sure that Virgil was not also a "modern man" in the sense probably intended. And as to the founding of Roman Catholicism, much depends on what one takes the name to stand for. There is a real sense in which it could intelligibly be argued—I do not presume to say with how much success—that Roman Catholicism is at least as old as the sub-apostolic age; there is another sense, I believe, in which it would be just as true to say that Gregory the Great was the first real Pope, and that distinctively *Roman* Catholicism dates, at earliest, from the final rupture of the Eastern and Western Churches in the eleventh century. But there are two things which are undeniable. Augustine is the first figure in European history whose intimate biography is known to us from his own writings; he is also the man who, more than any other, has stamped his own personality on the whole of subsequent Western Christianity, and on the whole of the civilisation which has its roots historically in Western Christianity. There is no getting away from his influence for us. It is thus appropriate and welcome that a group of well-known Roman Catholic writers, some of them philosophers of high distinction, should unite to give us their impressions of the man, and of his influence on the thought and life of the Europe to which we belong. Certain limitations are naturally imposed on the execution of the task by the very fact that all the associated writers are "Romans", and thus, in the main, see their hero in the same general perspective. Vast as the influence of Augustine has been on the life and thought of the Roman Church, more has come out of it than can be fully recognised from that single standpoint. If Bonaventura and Pascal and Newman are his descendants, so are Luther and Calvin, Leibniz and the whole succession of Post-reformation Anglican divines and moralists down to the middle of the last century; and from the point of view of the historian it is hardly satisfactory that these branches of the family should be more or less ignored as begotten "on the wrong side of the blanket". A volume of essays exclusively composed by "Romans" may be a valuable contribution to an historical estimate of Augustinianism, but, as some at least of the contributors to the present volume are doubtless aware, it

can hardly claim to tell the whole story. Occasionally also, in some of the essays, I feel that the edge of historical accuracy is a little dulled by the natural tendency to substitute the "preaching of a panegyric" for critical appreciation.

There is one other complaint I feel bound to make. Some of the most distinguished contributors to the volume are Frenchmen, and one Fr. Przywara has evidently written his essay in German. The translations of these contributions vary in their merits, but personally I feel that all of them interpose a veil between the reader and the thought of the writer. In the case of the essays of M. Gilson and M. Blondel, both thinkers and writers of the first distinction, the effect is perhaps no more than that a lucid and elegant writer becomes, in the version, a little tedious and difficult to follow. But the rhetoric of M. Maritain—none too attractive to some of us, even in French,—is almost intolerable when turned into unidiomatic English, and Fr. Przywara comes off worse still. Even in its German form, I take it, his style has probably more of fire than of light, and in its English dress the arguments by which it is somehow proved that Augustine's thought is a "synthesis" of Hegel and Kierkegaard, and again of Descartes and Pascal, are, to me at least, almost impenetrable. In view of the wide diffusion of a knowledge of French among educated British subjects—and the uneducated are not likely to study a volume of this kind—I could wish that the French contributions, at any rate, had been given untranslated. (Sometimes, I feel sure, there has been definite perversion of a writer's sense, as on page 344, where M. Blondel is made to speak of "the spirit which enlightens the very brightness of the Word", though he plainly must have written, "the spirit which the brightness of the Word itself illuminates" [*qu'illumine la splendeur même du Verbe*, or the like].)

A volume of this kind should be especially welcome to the student of the history of philosophy. It is too often forgotten, by students in our own country at least, that though Augustinianism is something more than a philosophy, it is also, or at least it contains, a great philosophy. (Mr. Russell, to take only one example of this historical error, when criticising Leibniz's arguments for the existence of God, attributed to him as his own invention the argument from the "eternal truths". This is so far from being an invention of Leibniz that it is *the* characteristic theistic reasoning of Augustine in *de libero arbitrio* II., and of his follower Anselm in the *dialogus de veritate*, as Leibniz presumably knew, and duly reappears in the works of the "Cambridge Platonists"). Students of the history of philosophy who have no personal knowledge of Augustine and Augustinianism will learn much which it "concerns them to know" from the three excellent essays of Mr. Dawson ("St. Augustine and his age"), Father M. C. D'Arcy ("the philosophy of St. Augustine"), and Fr. Rolland-Gosselin ("St. Augustine's system of morals"). I would particularly commend the first of these essays as a brilliant and generally thoroughly well-balanced historical account of the real issues at stake in the third and fourth century conflict between Church and Empire. Here and there, of course, writers express incidental opinions which do not always carry immediate assent. I doubt, for example, whether (p. 7) the Greek democracies can fairly be charged with assuming "the right of the citizen to be fed and amused at the expense of the state", and when I find another essayist talking (p. 88) of "Aeschylus, volcanic with black rocks and molten lava of speech", I wonder in what perverted text the writer can have read the most transparently lucid of the great tragedians, or whether

he is not thinking rather of Browning's caricature of the *Agamemnon* than of the Greek.

To the reader who already knows something of Augustine's thought I would specially commend the two essays—from a philosophical point of view the weightiest in the volume—of M. Gilson on "the future of Augustinian metaphysics", and M. Blondel on "the latent resources in St. Augustine's thought". M. Gilson's essay, the most purely philosophical of the whole book, is particularly interesting for its significant thesis that the one thing in Cartesian metaphysics which does not come from Augustine, the "geometrical method", is also the *πρώτον ψεύδος* of Cartesianism and all that has come out of it. M. Maritain, as I think, has not been equally successful in his treatment of the very live issue of the relations between Augustinianism and Thomism, partly because his concern is more with panegyric of both saints than with strictly philosophical appreciation, partly from an extra-philosophical, impassioned *parti pris*, which prescribes a tone of something like unreasoned contempt in his treatment of the Augustinianism of such men as Pascal and Malebranche. E. L. Watkin's study of the "mysticism of St. Augustine" is admirable in tone and deals with a fascinating subject. But I cannot help wondering whether the "rapt" and other abnormal psychical experiences which he notes as absent from Augustine's life are really not more often accidents incidental to the artificial life of the cloister than precious "gifts of the Spirit". Fr. Reeve writes interestingly, under the title "St. Augustine and Humanism", of the educational ideals of St. Augustine and their influence on the middle ages, especially on the centuries which saw the formation of the great monastic and episcopal schools. He might perhaps have noted that *scholasticus*, in the sense of a schoolmaster, is a much older word than his readers might imagine. The elder Seneca, who was personally intimate with the literary men of the Augustan age, regularly employs it as a designation for the professional teachers of rhetoric, and it is used once in the same sense by Virgil. The one essay which thoroughly disappoints me is Fr. Martindale's very slight sketch of Augustine's personal character and life. Fr. Martindale has evidently aimed at being piquant, with the result that, to my own mind at any rate, he only succeeds in being superficial, and, at times, to tell the plain truth, flashy.

There are a few ugly misprints or errors of proof-reading, such as *Cassiacum* (p. 34) for *Cassiciacum*, *Faustinus* (p. 92) for *Faustus*, and on page 82 a sentence is made senseless by giving the date 396, instead of 386, as that of Augustine's conversion.

A. E. TAYLOR.

Social Control of the Mentally Deficient. By S. P. DAVIES, Ph.D. London: Constable, 1930. Pp. xiv, 389. 13s.

THE problem of mental deficiency is certainly not being neglected. Many psychologists are studying it intensively, at the behest of criminologists as well as of educationists; eugenists have included it in their programme; Britain has had a Commission on the matter; and the British Medical Association has very recently appointed a committee to investigate it further. This gathering of interest is due to a sense of alarm, but only proximately; it rests primarily on our increasing devotion to statistics

and on the introduction of mental tests. Mental tests have provided us with a new definition of mental deficiency, a definition so concise that it lends itself, as the other definitions do not, to easy application: all that is necessary to determine whether a person is defective or not is to ascertain his intelligence quotient, and this can be done in a few minutes. This method has led to a crop of new statistics, which in turn have suggested startling generalisations. How far it is legitimate to generalise from a restricted set of figures when these figures concern mental characteristics, which are the most individual and complexly conditioned facts we know, is a point of logic which deserves more attention than it is getting. Certainly many of the generalisations that have been made are unsound. To take an example given by Dr. Davies, when the official report of the American Army Tests announced that 47.3 per cent. of the white drafted men were mental defectives, some people without more ado transferred the percentage to the total population of the States and concluded that these were harbouring 50,000,000 defectives. Others "allowed for" the selective factor and reduced the estimate to 19,000,000; but "allowing for", though a necessity, is a dangerous procedure, for it gives the impression of yielding new statistics when it is really nothing but a quasi-precise interpretation of old ones. I should have thought that, whenever anything of marked individuality is concerned, numbers must be got by counting, not by inference. The value to be attached to statistics is proportionate to the extent to which they set forth facts.

These last two sentences probably go further than Dr. Davies would be prepared to go. But he does maintain that the scare about feeble-mindedness is due to exaggeration. A point to which he gives a much-needed emphasis is that whatever figures are offered must be understood in the light of the conception of feeble-mindedness which underlay their compilation. There are two types of conception, the legal and the psychological. The significant difference between them is not that the first is authoritatively laid down and must be followed by State and municipal officers whereas the second is binding upon no one, but that the first defines feeble-mindedness or mental defectiveness as mental inadequacy for social life, while the second defines it as inability to reach a given intellectual standard. Dr. Davies' book would justify itself if it did nothing more than re-establish the primacy of the legal conception. Psychologists could excuse their appropriation of the term mental deficiency to indicate a low intelligence quotient only if they could prove (a) that the latter is a constant feature of mental inadequacy for social life, and (b) that the degrees of it correlate uniformly with the degrees of social incompetence. I wish the author had made and stressed this second requirement.

Dr. Davies will find many sympathisers with his commonsense criticism of the use of the usual intelligence tests as tests of mental deficiency in the social sense. The trouble with them is not simply that they are too narrow but also that they set the upper limit of deficiency much too high. Under the American Army tests mentioned above, only men found to have a mental age of at least thirteen escaped being classed as defectives. Dr. Davies' own view is that only adults having a mental age of 7 or less may be classed straightway as defectives, while adults having a mental age of between 8 and 12 may be classed as defective only if they show in addition emotional, conative and physical abnormalities. In effect, this means that these other abnormalities must be our test in the large majority of cases—a contention made by Dr. Herd in his recent book *The Diagnosis of Mental Deficiency*.

The main purpose of Dr. Davies' book, however, is practical—the way to deal with defectives. The beginning of the discussion is lightened by an admirable and wholly relevant historical sketch, in which due prominence is given to the extraordinary episode of Dr. Itard and the savage boy of Aveyron and to the long labours of Seguin in France and America. Little is said in this sketch about Britain, but perhaps little could be said. The two methods of controlling defectives, sterilisation and segregation, are then reviewed at some length. Sterilisation of defectives, it appears, was enacted in one of the states of the American confederation as early as 1907, and one state after another has followed the example, though with varying safeguards and varying degrees of enforcement. Dr. Davies shows his freedom from the tyranny of a current intellectual fashion in his insistence that we know far too little of the extent and mechanism of the transmission of feeble-mindedness to justify so drastic a preventive measure as sterilisation. He summarises the evidence suggested by the well-known investigations into the Juke and Kallikak families and by less-known inquiries of a similar kind, and refers to the American attempts to verify in this connection the Mendelian law and the counterclaim that feeble-mindedness is neither a unit determinant nor wholly hereditary. He would allow extreme eugenisists to maintain that the fact that only a small proportion of feeble-minded have feeble-minded parents can be explained away on the supposition that the remaining proportion are recessive, their parents being only carriers of the determinant; but he rightly retorts that both the fact and the supposition tell against any widespread application of sterilisation. In the present state of our knowledge, he concludes, this should be restricted to serious and indubitable cases. Segregation, on the other hand, he holds to be full of possible benefits. It embodies the attitude that, even if we knew the full hereditary tale and were thereby able to prevent the birth of future defectives, we should still have a duty to those now with us. Sterilisation is at best merely preventive, and we need something curative as well. The question of the length of the period of segregation—for life, for all that part of it when procreation or child-bearing is possible, or until made socially competent—is answered differently for the different types; for one of the contentions of the book is that we must drop the neat view of defectives as a class with none but insignificant differentiations within it. The aim of segregation is, of course, education. The lowest defectives can be educated, though only in and for an environment adapted to them; in other words they need to be permanently cared for in institutions. For many of the remainder, the ideal scheme is training within an institution, then in a colony under institutional supervision with "hours off" on parole, and finally careful discharge by placing in a natural but good social environment. The account of these stages of education is accompanied by illustrations of the work now being carried out in the States. The less serious cases, of course, may be adequately trained in special day-schools.

Dr. Davies' book is by far the best general treatment of mental deficiency as a social problem that I have met. Its range is extremely wide, and yet equal interest and care seem to have gone to every section. It is a small encyclopædia of the subject, admirably arranged, up-to-date, level-headed, and written with simplicity and charm. The reviewer is sincerely grateful for it.

T. E. JESSOP.

Crime as Destiny. By Prof. Dr. J. LANGE, Departmental Director of the Experimental Station for Psychiatry in Munich. Translated by Charlotte Haldane. London: Allen & Unwin, 1931. Pp. 199. Price 6s.

As a rule, when we call a man a born criminal we are doing nothing more than expressing our despair of his redemption. But all too easily we come to take the designation seriously, slipping into the assumption that incorrigibility is a proof of hereditary criminality. The assumption is obviously very questionable. Scientific investigators, instead, prove the inheritedness of a feature by exhibiting its presence in antecedent and subsequent members of the family line. This method, too, is questionable; the constant or frequent recurrence of a feature in a family line certainly points to transmission but does not of itself indicate the kind of transmission. The recurrent feature may be transmitted by example, by compulsion, by identity of professional, social or economic circumstances, by any or all of the multitudinous factors that we sum up in the term environment. The usual genealogical method, that is to say, does not give us an unambiguous cause, and a method is required that does.

Dr. Lange claims to have found such a method, which he calls the Twin Method. Twins, having begun their foetal development at the same time and continued it side by side, are much more likely than siblings to have a common inheritance; or, to turn the matter round, if they display closer similarities than siblings, these similarities may fairly be attributed to the common circumstances of their birth. The method seems to have been first used by Galton ("Inquiries into Human Faculty" under "History of Twins").

Dr. Lange sought among the prison population open to him offenders of twin birth. Since twins of opposite sex present differences which besides being inevitable are irrelevant to the problem he confined himself to twins of the same sex. In the end he selected thirty cases. His task was in each case to investigate the career of the criminal before him and that of the criminal's twin-partner, and then to trace the similarities and dissimilarities between them in respect of criminality. But an important division of cases had to be made. Twins may arise in two ways, firstly by the fission of a single fertilised ovum (monozygotic twins), secondly by the simultaneous fertilisation of two ova (dizygotic twins). Clearly, twins arising in the first way should originally have a similarity so profound as to amount almost to identity, since they will carry qualitatively identical genes; while dizygotic twins need have no more similarity to each other than separately born children of the same parents. If then we find that there is a close correlation of mental traits between twins of the first kind and scarcely any such correlation between twins of the second kind, we have sufficient evidence to conclude that the close correlation is most probably due to heredity—for when we compare two kinds of twins the environmental factor partly falls away.

Dr. Lange's result is striking. Of his thirty criminals thirteen are monozygotic and seventeen dizygotic. It transpires that the twin-partners of ten of the former also have criminal records, while only in two of the latter set are there criminal twin-partners. This is surely as good evidence as we at present have that criminality is heritable. The evidence would be complete if we could find that the close correlation holds good in cases of monozygotic twins separated from infancy, for then parentage would be the only common factor; but obviously such cases would be hard to come by. Perhaps it would be hypercritical to charge Dr. Lange's evidence

with the further defect that his "monozygotic" twins are only presumptively such; they could not be otherwise. Dr. Lange is of course aware that an innate tendency is by itself an abstraction, a not completely determinate tendency, both its realization in conduct and the mode of that realization being determined in part by the environment; as he remarks, "heredity is nothing without environment"; but his result does prove that similar environmental influences evoke far more similar reactions from monozygotic than from dizygotic twins, and that this fact requires us to assume that in the former cases there are innate similarities of tendency.

Nevertheless it would, I think, be a mistake to attach a very high value to this result, for after all it is simply an admirably conducted proof of what almost every student already believes, namely that we start life with a bias. The work has two limitations. Firstly, the range is narrow: where something so individual and complexly conditioned as human behaviour is in question, far more than sixty persons need to be studied. Dr. Lange is sensitive to this limitation; he offers his work as a modest contribution only; and he could plead that the investigation of even so small a number of cases has involved many years of labour. The second limitation is more serious. The result has not been analysed psychologically. Criminality is an abstract idea, not a fact. It is not inherited. We may grant the heritability of easy liability to sexual offences, because we can adduce in partial explanation of them known physiological factors. But it is difficult to believe that anything so specific as a tendency to arson, theft, swindling or wounding is inherited. These need to be analysed into the original mental impulses behind them; the specificities determined by the criminal's experience and by the external circumstances of his offence must be ascertained, and the basic dispositions of human nature as such searched out and scrutinised for omissions and disproportion. Dr. Lange has not attempted to do this, and until it is done we shall not even begin to understand the mind of criminals. He provides psychological data; but they are vague and he does no psychological work on them. I make this point not against the author but against Mr. J. B. S. Haldane, who in a foreword describes the book as a "masterpiece of scientific psychology". The book is really a patient and felicitous sociological inquiry without any psychological pretensions.

A few general conclusions are drawn. Dr. Lange finds that none of the persons studied had at first any *will* to pursue crime: a few, indeed, did later come to regard crime as a profession, but only when the ostracism and penury following imprisonment virtually compelled them to do so. He finds, too, that most of his subjects showed considerable suggestibility (which, of course, is tantamount to great susceptibility to external influences, though Dr. Lange rightly insists that these operate on something innate). He finally makes three suggestions for the reduction of crime—a campaign against drink, the permanent segregation of persistent offenders, and, when the mechanism of heredity comes to be understood, the prevention of parenthood where the offspring would be cursed with hereditary "criminal" taint. His aim is not the redemption of the criminal but the protection of society—which explains the triteness of these recommendations and the absence of any probing into psychological issues.

The book well deserves to be bought as a concise record of carefully studied delinquent careers, each of which is given in outline. The inferences are always drawn with attractive modesty—for the title *Crime as Destiny* is shown by all that follows to be a proposition which the author wishes to have discussed rather than a thesis which he seeks to impose.

T. E. JESSOP.

Our Knowledge of Other Minds. By W. WYLIE SPENCER. New Haven: Yale University Press (London: Humphrey Milford, Oxford University Press), 1930. Pp. 145. Price 9s.

Our Knowledge of One Another. By C. C. J. WEBB. London: Humphrey Milford, 1930. (Annual Philosophical Lecture, Henriette Hertz Trust, The British Academy). Pp. 18. Price 1s. 6d.

MR. SPENCER proceeds throughout on three assumptions: (1) That the only mental life which each of us initially knows is his own; (2) that besides this he knows only bodies, including his own; and (3) that from the appearance and behaviour of some of these bodies he infers the existence of other minds connected with them as his own mind is connected with his own body.

Prof. Webb contends that this position is untenable. He does so on the ground that what we now understand by self-consciousness is awareness of the self as distinguished from and related to other selves. In particular he urges that reflective self-analysis is preconditioned by knowledge of other minds. It is not obvious that Prof. Webb's argument excludes the possibility of the individual's knowing his own mind in a more rudimentary way before knowing other minds. It may still be urged that since he experiences only his own experiences, these are all that he is directly acquainted with; and it may be plausibly inferred that these are all he originally knows. Further, he may have a knowledge of his mind not in distinction from other minds, but in distinction from body.

It is on this basis that Mr. Spencer undertakes to show how the individual can and does acquire knowledge of minds in others, related to their bodies as his own mind is related to his own body. Such an undertaking, whether it succeeds or fails, must, if ably and conscientiously carried out, be instructive and valuable. It must either confirm the assumptions from which it starts or supply ground for denying or doubting them. Mr. Spencer's work is both able and conscientious. He is rigorously critical except, perhaps, just at the end.

He has to show (1) how even the thought of other minds can arise; (2) how the belief in the existence of other minds can be psychologically accounted for; and (3) how far it is logically justifiable. He dismisses first, as quite inadequate here, analogy founded on resemblance between the appearance and behaviour of other bodies and the individual's own body. Next he considers possible "special criteria" of the presence of mind. His object is to enquire whether there is anything in the behaviour of bodies which cannot be accounted for by purely material conditions, but must be interpreted as due to mind even by an individual who originally has not even the thought of minds other than his own. He has prepared the way for this step by giving a long list, borrowed partly from Mr. Henry Sturt, of what he takes to be distinctive characteristics of mind. Though perhaps it does not affect his purpose, it is unfortunate that in this list Mr. Spencer enumerates mental characteristics higgledy-piggledy, as if they were separate faculties; and that some, already well-established under old names, re-appear under new ones—e.g., "elasticity" seems to be indistinguishable from the unity of apperception. The upshot of the examination of special physical criteria is that they are found to prove the possession of certain "noetic characteristics"—especially "planfulness" (which is a form of "coactivity" or "the power of the mind to be dominated by a single noetic system") and the power of making judgments

—and these in their turn are found very probably, but not certainly, to involve consciousness. Finally Mr. Spencer passes to "responsive" behaviour, and in this he finds the solution of his problem. Even at this point he begins by being severely critical. He will not admit that the responsive behaviour of the nurse who, *e.g.*, puts a rattle in a child's hand which is stretched out for it but cannot reach it, is sufficient to awaken in the child recognition of a mind in the nurse. In such experiences "other persons have appeared to him only as doing what he would do for himself if he could. Other persons must indeed henceforth be important entities in his life, specially recognised for the assistance which they give to him in manipulating the physical world, but the part they play is so far only similar to the rôle played by his own body" (p. 124). So far Mr. Spencer is consistent. If the child starts without any sort of cognisance of mind, or even the thought of it, it can hardly interpret the behaviour of the nurse as indicating her mental life. But in what follows he becomes inconsistent. He does not find the same difficulty in more complex forms of responsive behaviour, in which the child plays a more active part, *e.g.*, the games of Peek-a-boo and Pat-a-cake (p. 141). But the situation in such cases differs only in complexity from the simpler case of the nurse who gives the baby his rattle when he cries for it. There is no difference in principle. We must add that before the baby can begin to play "Peek-a-boo" he must already have some awareness of his nurse or mother as embodied minds; and the same objection applies to all the examples given by Mr. Spencer.

I conclude, then, that if Mr. Spencer's general argument is valid, what he has shown is that on his initial assumptions the individual never can know minds other than his own. If this conclusion is, as it appears to me, absurd, there must be something wrong with the premises. In short, Mr. Spencer has helped to prove Prof. Webb right.

The book is well written, lucid, and interesting throughout, not only in its treatment of its own special subject, but also in its careful handling of the many questions which it incidentally raises. It takes full account of what is most important in the writings of others on the same problem. All who are interested in the rather unjustly neglected topic with which it deals should make a point of reading it.

A. K. STOUT.

Indian Logic in the Early Schools. A study of the Nyāyadarśana in its relation to the logic of other schools. By H. N. RANDLE. London: H. Milford, Oxford University Press, 1930. Pp. xii, 404. Price 12s. net.

THE chief purpose of this book is "to interpret Indian logical doctrine in its historical development". The author some time ago pointed out in *MIND* (1926, p. 84) that we are only now beginning to understand what the Indian logicians meant. The authoritative primary texts of the different schools have been known for a long time, but these consist of brief memorial sentences, which doubtless were expounded orally to the pupil when he committed them to memory. But the first Western students had little exposition to go on, and the less there was the more easy it was for scholars to take the complacent view that Indian philosophy was a plain subject and easy to report. It is now clearer that we have a long development of doctrines and theories to deal with. In the space of ten years, says Dr. Randle, India has rediscovered the logical classics of the

ancient school. A series of elaborate commentaries has been published, and the works of Buddhist logicians are still being discovered. The present work, however, is chiefly concerned with the orthodox school known as Nyāya; but as several other schools developed logical theories, and the Buddhists an important school of their own, the interchange of argument makes it necessary to discuss them all.

Indian logic was never merely formal or confined to showing the consistency of thought processes. It claimed to be one of the means of reaching absolute truth, and it had to justify itself both against the materialists and the scepticism of the Buddhists. Hence Indian logic includes many epistemological problems. The spirit and method in which the Indian philosopher approaches them, says the author, are in no important respect different from, but in all essentials quite parallel with, the spirit and method of contemporary philosophy. The subject is thus not one of mere antiquarian interest. Parallels are pointed out, not only in Locke, Berkeley, and Reid, but also in Dr. Moore's *A Refutation of Idealism*. The Indian theories of knowledge are discussed in an important chapter on Truth and theories of error. The realistic standpoint of Nyāya also raised psychological problems, and these have to be treated in a chapter on Perception before coming to logic proper. The rest of the work deals with inference, the five-membered syllogism and its fallacies, on the *probandum* (what is it precisely that is inferred in an inference), on means of knowledge other than perception and inference, and sophistical refutations.

There is no doubt that this is the fullest and soundest work produced so far on the nature of Indian logic. It is now possible to see what the essential problems of the Indian thinkers were, and to a great extent how they worked them out. There are still doubtful points in the history. Dr. Randle takes it as proved that logic proper did not exist in India prior to 200 B.C. His argument is that in the Pali Buddhist work *Kathāvatthu* (which is traditionally of that date) nothing like the classical logical method is found, and if it had existed, "this cumbrous methodology could hardly have remained in use". This assumes that the Pali Buddhists, who did not use Sanskrit, must have borrowed from a Sanskrit Brahmin school if it had existed. But we know that the Pali Buddhists did keep their cumbrous methodology long after real logic arose; and in the Pali commentaries, which are as late as the fifth century A.D., and are attributed to an Indian of brahmin origin, the terms for 'logician' (*takkin*, *takkika*) are explained without the slightest trace that there was such a thing as a school of logic. Dr. Randle admits that the Pali Canon might have been provincial and representative of a lower stratum of contemporary culture. These are hardly good grounds for holding it to be proved that logic proper did not exist in India before 200 B.C., especially when Dr. Randle admits that the *Kathāvatthu* may be much later than the third century.

It is a surprising fact that it is difficult to ascertain the original meaning of some of the fundamental conceptions. *Pūrvavat* is said to mean inference from effect to cause (p. 153), and yet we are told further on that the same commentator explained it alternatively as inference from cause to effect. Either more discussion is needed or an admission of uncertainty. The uncertainty is not decreased when we find that even the Indians analysed the term in two ways.

The term *sāmānyato dṛṣṭam* is translated 'seen from likeness'. One commentator was so unsure about the meaning that he took it to mean

'not seen,' etc. Garbe translated it 'induktiv,' until Jacobi pointed out that it might equally well be translated 'deduktiv'. The latest editor of the *Sūtra* translates it 'durch Analogie'. Dr. Randle offers a conjecture, but ignores all these, and only refers to Keith's view in a note. "If conjecture is permissible, it may be conjectured that *sāmānyato drṣta* meant for the *sūtra-kāra* just what is meant in the *Vaiśeṣika-sūtra*". Even a conjecture might receive some value if it were discussed in the light of rival interpretations.

E. J. THOMAS.

Locke, Berkeley, Hume. By C. R. MORRIS. Oxford University Press, 1931. Pp. 169. 6s.

THIS is a book to gladden the heart of the Pass student in philosophy. It gives a clear and precise account of the teachings of Locke, Berkeley, and Hume, and it does this without becoming a mere catalogue of theories. Unlike many text-books, it awakens rather than deadens the reader's interest in the subject. The book opens with a few neat pages setting forward the aim of the work and introducing the reader to Empiricism. In the account of Locke which follows we have one section on his life, another on his theory of knowledge, and the third on his moral and political theory. This order is also followed in dealing with Berkeley and Hume. Finally, a short essay discusses in a suggestive manner the influence of these three thinkers on subsequent thought. To cover this ground at all adequately in the limited space at Mr. Morris' disposal is no small feat, and he is to be congratulated on having succeeded so well in a difficult task.

As the book is likely to be used extensively we may, perhaps, be permitted to make one or two observations upon it. To take a small point first, could not a fuller account have been given of the authors' works, particularly of Locke and Berkeley? For instance, even a Pass student should have learnt how important the *Commonplace Book* is in the study of Berkeley. But the book is not mentioned in the life (p. 61 ff.), although one or two quotations are made from it later, without, however, referring to its importance. Again on page 110 the date of Hume's return from France to London, given here as 1776, is a misprint for 1766. (As is also 'Johnstone' in the Preface.) Lastly, the phrase "intercourse with Jonathan Edwards" in the account of Berkeley's stay at Rhode Island suggests that Berkeley met Edwards and conversed with him. Is this definitely proved? He met Samuel Johnson, of course, Edwards' teacher. But did he meet Edwards himself? Fraser considered the matter doubtful. But perhaps Mr. Morris has new information in this connection.

To pass to more important matters, the best part of the book is the study of Hume. The section on Hume's theory of knowledge seems to me particularly good, covering as it does the whole of the first half of the *Treatise*, with the exception of Part II. This omission is not serious, though II. vi., might have been given a little attention even in this limited account. The omission of all reference to Book III. of the *Essay*, however, in the statement of Locke's theory of knowledge is more serious. III., iii., in particular, with its acceptance of the distinction between the real and nominal essence of substances throws a great deal of light upon Book IV. For this distinction (together with the related theory of "ideas which are their own archetypes") really accounts for his later scepticism. Mr. Morris, however, does not mention it, and his statement of Locke's

scepticism (v., pp. 48-49) seems to me to lose grip in consequence. Again, in discussing Locke's theory of perception, should not some reference have been made to such passages as II., xiii., 1 of the *Essay* which do not wholly accord with the account given by Mr. Morris (pp. 30-33)? Lastly, whilst Mr. Morris continues to regard Berkeley as "one of the great philosophers", it is difficult from his account to see why. The impression one gets after reading pages 61-107 is that Berkeley contributed very little of permanent value to philosophy. This may be the true view. On the other hand, Mr. Morris may not have done full justice to Berkeley in these pages. Is Berkeley's immaterialism so unimportant? And, to take another instance, does Mr. Morris fairly present the real point of Berkeley's attack on Locke's abstract ideas? The fact that in dealing with Locke he makes no mention of III., iii., seems to me to suggest a negative answer. For Berkeley had the evil consequences of this chapter in mind throughout.

I should like to repeat, however, that the book as a whole succeeds admirably in its purpose and can be recommended for use in the classroom. At the same time, one hopes that Mr. Morris' book, together with its sister-volume by Dr. Mellone, will not altogether displace some of the commentaries already in use. It would be a matter for regret if English students no longer read, for instance, Prof. Kemp-Smith on the Cartesians, Prof. Joachim on Spinoza, and Prof. Gibson on Locke. Mr. Morris no doubt would readily agree with me in this matter. He himself appends a bibliography that should prove useful to the student.

R. I. AARON.

After Two Thousand Years: A Dialogue between Plato and a Modern Young Man. By G. LOWES DICKINSON. London: George Allen & Unwin. Pp. 213. 6s.

It is well that philosophers should be reminded from time to time that the dialogue is the appropriate form for the discussion of real questions; for this may encourage them to discuss such questions. Also, since it is admittedly a difficult form, its use puts a premium on a philosophy which is also literature. Of its possibilities in this direction the readers of Mr. Dickinson's *Modern Symposium*, *The Meaning of Good*, and *Justice and Liberty* have no need to be told. Finally, inasmuch as Plato is the initiator and unsurpassed master of this way of philosophizing, it is quite in order to conjure him up (or down?) from the supercelestial spheres to converse with 'a modern young man' about the problems of our much-harassed civilization. This young man, who merely describes himself as a 'lover of truth,' is evidently no lover of 'dialectic,' and is interested, not in the epistemological problem of truth for its own sake, but in truth for its results alone. So he discusses such topics as democracy, economics, eugenics, birth control, racial rivalry and war, together with truth, art and love as ideal 'goods' and ends in themselves, in the graceful style of which Mr. Dickinson is a master. But he seems a little hampered by his setting. He encounters 'Plato' in the Elysian Fields, which would appear to be a sort of neutral meeting-ground for the denizens of earth and the spectators of the supercelestial being out of time and place. This setting renders a little incongruous the disregard of any but a physical environment which he declares to be characteristic of our age. 'Plato' suffers somewhat similarly. He has been so busy contemplating the eternal verities that he has not kept himself informed of what is going on in the sphere of Becoming, and has to be told about everything on earth. So

naturally his criticisms also strike at the obvious, and are not driven home. Moreover, his supercelestial sojourn does not seem to have been at all beneficial to his mind. Both his memory and his vigour appear to have deteriorated, and he has developed some of the amiable ineffectiveness of mediumistic communications from the spirit world. He seems lukewarm about defending his own views (or at least those which his interpreters have assigned to him!) and his criticisms of our affairs are somewhat lacking in punch. Nor should he ever have admitted (p. 84) that the transition from the 'necessary' to the 'luxurious' State in the second book of the *Republic* was forced upon him by Glaucon's craving for amusement. He should have retorted that the way in which his 'Socrates' goaded his 'Glaucon' into condemning the simple life of the 'city of pigs' was one of his subtlest and happiest touches: for it was by the lure of pleasure that a city ministering only to bare living was raised into one that could aim at good living, even though at first only in undesirable and untenable ways. Thus innocent 'Glaucon's' verdict conceded to artful 'Socrates' a necessary step in the evolution of the Ideal State. One regrets also that Plato is not allowed to thresh out the thoroughly Platonic and very promising little question whether, because knowledge is a good, knowledge of evil does not become good likewise (p. 132), and that Philaethes's plausible suggestion that if the Universal Mind is a common reservoir which preserves all things it is "rather like a common cloaca into which flow all the ordures of the world" (p. 206), is not taken up. But no doubt if all the questions Mr. Dickinson touches on had been accorded the thorough discussion they deserve, the length of his book could have been multiplied tenfold.

F. C. S. SCHILLER.

L'objet de la Perception : Étude psychologique. By R. DURET. Paris: Alcan, 1929. Pp. 102 + iv. (Bibliographie). 15 frs.

Les Facteurs pratiques de la Croyance dans la Perception. By R. DURET. Paris: Alcan, 1929. Pp. 254 + xi. 30 frs.

These two books follow in the best traditions of philosophical psychology, and show convincingly that philosophical psychology isn't dead, isn't dying, and isn't likely to die. They are not altogether easy to read, principally because the author (who is unusually erudite) is always anxious to be scrupulously fair to all the important views he has encountered. He is always the master of his erudition, however; and the careful analysis of the first of these books, together with the calm good sense with which, in the second of them, he examines the claims of "vivacity", bodily feeling, motor adaptation, etc., to be regarded as the primary or the only foundation of the belief that is aroused by sense-perception, give constant joy to the reader. In short, these books deserve the careful consideration of all serious students of this important subject.

It would be difficult not to be impressed by the fineness as well as by the range of M. Duret's scholarship (e.g. in his references to Hume or, among modern authors, to Stout); by his illuminating illustrations from modern art (e.g. Cézanne's, or, again, from his discussion of "movies" versus "talkies"); by the care and perspicuity of his investigation into the anomalies concerning, or absence of, perceptual belief in the case of "depersonalised" psychasthenics (as well as by his account of hallucinatory beliefs and of the quasi-belief in dreaming); and by his detailed arguments

concerning the localisation (if any) of images, with special reference either to the actual or to the imagined position of our bodies at the time of imaging. But apt illustration and delicate analysis of this species is an outstanding feature of M. Duret's entire discussion.

M. Duret reaches a balanced but also a very complex conclusion not very dissimilar from Stout's; and I fear that any summary I could give would be over-long. The following passage, however (p. 73 of the shorter book) may indicate this author's general attitude: "If external experience signifies the object to us only by the irregularity with which it varies during the course of our action, and if, on this account, the object is defined to our consciousness, not as a sensible complex, but as an agent that is co-present with us in the production and variation of the 'given', it is not only possible for us to think of the object as persisting after we have ceased to perceive it, but the very supposition would be unintelligible if the object either did not exist or could not operate except at the moment during which it is presented to us".

JOHN LAIRD.

Vorstellung und Denken: Eine Kritik des pragmatischen Verstandes. By ERNST BARTHEL. Munich: Ernst Reinhardt, 1931. Pp. 214. M. 10.50.

THE writer would seem to be a typical German metaphysician of the traditional sort, such as is rarely found nowadays. That is, he is an apriorist *enragé* who loathes everything empirical (p. 88 n., 134), identifies himself with his philosophy (p. 134, *la méthode c'est moi*) and with the Absolute (p. 100, 115), is extremely dogmatic, and very quarrelsome. He is not indeed able to quarrel with the American and English pragmatists, because he shows no sign of having read any of them, and because they would doubtless be rather pleased by his identification of the 'pragmatic understanding' with the method of science; but he defies Euclid, Copernicus, Galileo, Newton, Locke, Darwin, Einstein, and what are usually considered the essential doctrines of Kant. For all these have yielded to the method of the 'pragmatic understanding', which is tied to practice and unconsciously refers to it (p. 9), and are not concerned with pure transcendental knowledge, which contemplates the absolute and apprehends it by an intuitive perception of essences. Now for the pragmatic understanding no terms of abuse are too strong. It is hardly human, being merely an extension of animal consciousness (p. 11), and is fit only for Americans, who "happen to have some human qualities" (p. 81), and Englishmen, whose 'commonsense' is scientifically negligible (p. 143). Instead of this despicable procedure he recommends the superior 'dignity' of pure transcendental *Wesensschau*, which intuitively goes to the heart of reality and yields infallible truth. In this respect he is hard to distinguish from the German 'phenomenologists' (as he admits, p. 132), and his doctrine is open to much the same objections. He discusses 'self-evidence' as a criterion of truth (p. 74 f.), but has to admit that it remains liable to error and cannot be rendered cogent; also the question of a criterion of truth generally (p. 150 f.). The final criterion is found in 'what is self-evidently true for a complete personality' (p. 152); but it is admitted that a certainty so guaranteed always remains disputable. So the care of the criterion of truth has ultimately to be relegated to the Absolute (p. 153). Not, one would think, a very helpful proceeding, unless one is as certain as Dr. Barthel that one is the mouthpiece of the Absolute. And

there is the further complication that the Absolute has so many mouth-pieces and no two of them ever seem to deliver the same message! It is difficult not to feel a little sorry for the Absolute when it has thus to endorse the 'intuitions' of its admirers.

F. C. S. SCHILLER.

Cosmic Problems: An Essay on Speculative Philosophy. By J. S. MACKENZIE. London: Macmillan & Co., 1931. Pp. ix, 122. 6s. net.

THIS short essay on a large theme is exceptionally full of matter, all of it pertinent and expressed with the author's invariable and quite remarkable lucidity. It is a sequel to Mr. Mackenzie's *Outlines of Metaphysics* and has all the merits so conspicuously shown by its predecessor.

After explaining in a general way why he is still able to follow (I should say to develop) the idealistic tradition, Mr. Mackenzie approaches the Absolute and (more fully) a Creative Theism through certain recent expositions of the conception of Value, and thereafter discusses Space-Time, Evolution, Freedom, Immortality, Deity and the Present Outlook on Religion in successive chapters. In view of the extreme condensation necessitated by the brevity of his exposition, I fear that any further condensation on my part would be misleading. I understand Mr. Mackenzie to mean that ultimate values and the principle of perfection imply a system of universal meanings; that these imply a universal mind; and that such a mind must have a "creative aspect". "Good would be essentially meaningless if there were no good things" (p. 29). And on the whole I take the uppermost trend of his thought to be largely of an æsthetic sort, on the general lines that Beauty must express itself in fact or be definitely imperfect. As I have said, however, any such jejune statement (or even a much better one) would be necessarily inadequate, because the whole book is itself a summary which contains amazingly little that even a captious critic could call redundant. Accordingly I shall only add that Mr. Mackenzie has accomplished his design (p. 119) of being as little dogmatic as is reasonable in any one who has strong convictions and also has something (indeed a great deal) to say; and that his references to contemporary philosophical literature are so numerous and so accurate as to lead one to wonder whether there can be many philosophers in this country so well equipped as he in this respect.

JOHN LAIRD.

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VIII.—PHILOSOPHICAL PERIODICALS.

REVUE NÉO-SCOLASTIQUE DE PHILOSOPHIE. xxxiii^e Année. Deuxième série. No. 29. Février, 1931. **L. Noël**, *Après cinquante ans*. [Retrospect over the half-century since Leo XIII.'s brief establishing the Chair of Thomistic philosophy at Louvain, with special reference to the coming unveiling of a memorial statue of Cardinal Mercier.] **M. de Wulf**, *L'augustinisme "avicennisant"*. [Maintains, against Gilson, that there is a common body of "older scholastic" doctrine against which Thomism is a revolutionary counter-movement; that the central point of disagreement is not epistemological but metaphysical; that the non-Augustinian source of this metaphysic is not Avicenna but "Avicebron"; that the real conflict is between two rival interpretations of "contingency".] **A. M. Festugière**, *Le sens des apories métaphysiques de Théophraste*. [The *Metaphysics* of Theophrastus is a criticism of Aristotle leading to the conclusion that the immediate response to the "first mover" cannot be the "circular motion"; it must be the movement of a *soul*. Thus we discover in the first and most authentic disciple of Aristotle the lineaments of Christian theology. (The author might have added, and of the characteristic theology of Plato's *Laws*.) It is suggested also that the preoccupation of Theophrastus with the doctrines of Aristotle's *Metaphysics* A is an argument against Jaeger's theory that the book represents a point of view finally rejected by Aristotle.] **P. Henry**, *Le problème de la liberté chez Plotin*. [Does Plotinus recognise human freedom? If he does, can we say that his philosophy is "pantheistic"? Is God free, according to him, and in what sense? In the first instalment of his essay Mr. Henry concludes from a review of texts that Plotinus insists from first to last on freedom in man as an incontestable fact, though always maintaining that the fact is compatible with universal "necessity". This leaves for fuller investigation the question whether his philosophy is "pantheistic".] **A. Mansion**, *Autour des Éthiques attribuées à Aristote*. [An account of von Arnim's plea for the authenticity of the *Magna Moralia* and the literature to which it has given rise. The author's conclusion is that, in spite of the ingenuity of many of von Arnim's arguments, the evidence is definitely against ascribing the M.M. either to Aristotle or to an immediate disciple. To be continued.] Book reviews, etc.

ERKENNTNIS Band i., Heft 2-4 (*Annalen der Philosophie*, Band ix., Heft 2-4), 1930. [This triple number is devoted entirely to a report of the first conference on the Epistemology of the Exact Sciences, held at Prague in September last in conjunction with a conference of German mathematicians and physicists. It is virtually a symposium on the meaning and worth for physics of probability.] **P. Frank**, Opening address. **Hans Hahn**, *Die Bedeutung der wissenschaftlichen Weltauffassung, insbesondere für Mathematik und Physik*. [Thought is tautological. Hence metaphysics is impossible. Fact can be known only by being observed; thought can

only translate it into symbols and analyse these, and does so merely because thereby a more manageable content is secured.] **O. Neurath.** *Wege der wissenschaftlichen Weltauffassung.* [Our search for the right apprehension of the world has taken us through magic, religion and philosophy to materialistic empiricism, which latter differs from the old empiricism by aiming at a logical unification of all branches of science.] **P. Frank.** *Was bedeuten die gegenwärtigen physikalischen Theorien für die allgemeine Erkenntnislehre?* [Science is a system of signs for the ordering of experienced and experienceable events. Since the whole meaning of the signs is their standing for the facts, every change in the former is determined by the latter; that is, scientific propositions have no metaphysical meaning. Insoluble problems are problems stated in signs that have no assignable empirical basis.] **H. Reichenbach.** *Kausalität und Wahrscheinlichkeit.* [Science has to range propositions not into true and false but in an order of probability. Analysis of this notion. Both truth and causality are simply limiting cases of probability.] **R. v. Mises.** *Ueber kausale und statistische Gesetzmässigkeit in der Physik.* [Modern experiments have not contradicted the classical physics but they have shown that a statistical physics is more adequate. The new indeterminism rests not on merely practical, but on essential, limits of measurement: the old conception of endless approximation to accuracy is, moreover, logically incompatible with the notion of atomicity.] **P. Hertz.** *Ueber den Kausalbegriff im Makroskopischen, besonders in der klassischen Physik.* [Despite the principle of reversibility in the new physics, we must regard the order of macroscopic events as irreversible.] **F. Waismann.** *Logische Analyse des Wahrscheinlichkeitsbegriffs.* [Probability is not merely ratio of frequency but also degree of possibility. Criticism of logical and statistical conceptions of probability.] **H. Feigl.** *Wahrscheinlichkeit und Erfahrung.* [Probability as a mathematical and as a physical concept. Statistical probabilities have as much warrant as any other inductively grounded predictions.] **A. Fraenkel.** *Die heutigen Gegensätze in der Grundlegung der Mathematik.* [The problem how the refounding of mathematics, called for by the antinomies, is to be effected turns on the applicability or otherwise of the Aristotelian logic to infinite classes.] **R. Carnap.** *Bericht über Untersuchungen zur allgemeinen Axiomatik.* Discussions on the papers. Historical annotations. Bibliography.

Heft 5. **F. Kraus.** *Eins- und Vieles-Problem in biologischer Betrachtung.* [In man mind and matter are seen to be a distinction of point of view only, separate constructions out of neutral elements.] **L. von Bertalanffy.** *Tatsachen und Theorien der Formbildung als Weg zum Lebensproblem.* [Long and documented study of the principles of biology. Physico-chemical ideas are not adequate for biology, but metaphysical ideas are not to be imported. Ten empirical ontogenetic laws are enunciated (e.g., the development of each part of the germ is controlled by the whole; the line of development, once determined, is continued whether it be favourable or not), and deduced from two first principles—the organism (a) seeks to preserve its state, and (b) strives after the complete unfolding of its characteristic potentialities.] News, including report of the Oxford Congress by K. Roretz.

Heft 6. **K. Lewin.** *Der Übergang von der aristotelischen zur galileischen Denkweise in Biologie und Psychologie.* [The Galileian way of thinking differs from the Aristotelian in (a) avoiding all terms of evaluation; (b) replacing sharply separated classes by graduated series; (c) preferring the category of function to that of substance; (d) holding to the universality of law; (e) not taking mere regularity or frequency as the criterion of a

law; (f) not regarding an average as an essence. Psychology is still too Aristotelian.] **J. Schaxel.** *Das biologische Individuum.* ["We always find something relative, never an absolute. The individual is a transient state in the process of life, no more mysterious than Nature generally, which we understand because we ourselves are a part of her. Dialectical thought is simply a reflection of the objective dialectic of Nature." Supports the dialectical materialism of Karl Marx.]

KANT-STUDIEN. Band xxxv., Heft 4. 1930. **J. Geffcken.** *Unser Ringen um das Verständnis des Griechentums.* [Any unitary characterisation of the Greek mind is difficult, because reason and passion, moralising and frivolity, all co-exist in Greek life; but naturalism, the ideas of the good and the beautiful, and the thirst for knowledge may fairly be regarded as typical.] **E. Utitz.** *Zur Philosophie der Jugend.* [Essay in the philosophy of history, chiefly with reference to the ideas of the Spaniard Ortega y Gasset and of Moritz Schlick. The enduring problem is the tension between man's ideal aspirations and his material basis. But both sides are fulfilled in the "incarnation" of values.] **H. Gomperz.** *Kann die Deduktion zu "neuen" Ergebnissen führen?* [The syllogistic conclusion is new only in the sense that it does not follow from either premiss taken singly. But Mill was wrong in substituting induction for deduction as the method of discovery. Both forms alike give a mere "what", never a "that"; the factuality of fact is discovered and established purely by observation.] **H. Höfding.** *Zur Stellung der Erkenntnistheorie in unserer Zeit.* [As in the past, a new philosophical advance will be made when current science has been comprehended. The work of Einstein and Bohr has sharpened afresh the problem of causality. If the jump of the electron is really unaccountable, physics has simply discovered the limit of its own application of the principle of causality; but the fact remains that the jump has been revealed by the use of classical methods, i.e., the causal principle is still a principle of physics up to this point.] **H. Kuhn.** *Das Problem des Standpunkts und die Geschichtliche Erkenntnis.* [The knowledge of the historian is itself historically conditioned. The current ideal of "pure" historical knowledge is barren; fact is destroyed rather than revealed when reduced to a mere residue by subtracting the historian's own value-judgments. All history is history of spirit and requires a knowledge of and attitude towards the spiritual in man.] **O. Engel.** *Vom Verhältnis Christof Schrempfs zu Immanuel Kant.* **M. Buber.** *Franz Rosenzweig.* [Obituary notice.] Reviews. News, including critical report of the Oxford Congress by Müller-Freienfels.

RIVISTA DI FILOSOFIA NEO-SCOLASTICA. May-August, 1930.—**Christoforo Krzanic** 'Grandi Lottatori contro l'Averroismo.' [Deals with Thomas of York and five disciples of Bonaventura.] **Giorgio la Pira.** 'Il Concetto di Legge secondo San Tommaso.' [The divine laws in accordance with which God rules the universe appear in the world as laws of nature; but (Aquinas teaches us) the rationality of man makes his relation to the law of his nature a peculiar one, which is examined in this article.] **Bohdan Rutkiewicz.** 'L'Anti-Intellettualismo di Bergson e il Finalismo Biologico.' [A chapter from a book published in Polish. Bergson rejects the teleological interpretation of organic life as the application of an intellectual category to facts to which it is not adapted.]

But this rejection is due to his mistaken 'anti-intellectualism'.] **Gerardo Bruni.** 'Catalogo dei manoscritti egidiani romani.' [Catalogue of the MSS. of Egidio Romano now in Rome.] Reviews etc.

Sept.-Oct., 1930. **Paolo Rossi.** 'Sulla Critica al Determinismo dei Fenomeni Fisici.' [Argues that recent discoveries in physics do not justify us in giving up the principle of causality.] **Giuseppe Zamboni.** 'Percezionismo immediato e realismo critico.' [Reply to an article by Cantagalli called 'La filosofia del fantasma'.] **R. Martini.** 'La soluzione Abelardiana del problema degli universali.' [Maintains that Abelard is a 'moderate realist'. For him, genera and species are not 'subsistentia', but 're vera significant per nominationem res vere existentes'. They are apprehended by an act of abstraction which does not alter the nature of what is apprehended.] Reviews, etc.

Nov.-Dec., 1930. **Marino Gentile.** 'Platone autore di drammi filosofici.' [Discussion of Marazzan's 'Scene e maschere del dramma socratico' in which the Socratic dialogues of Plato are treated as dramatic compositions.] **Romano Amerio.** 'Le dottrine religiose di Tommaso Campanella.' [An exposition of Campanella's views.] **Michele Losacco.** 'I fondamenti dell'oggettivismo.' [A discussion of De Sarlo's 'Introduzione alla filosofia'.] Reviews, etc.

Jan.-April, 1931. **Martin Grabmann.** 'L'influsso di Alberto Magno sulla vita intellettuale del Medioevo.' [A lengthy study of Albert, in which his importance both as an original thinker and as the fore-runner of St. Thomas is emphasised.] **S. Vanni-Rovighi.** 'L'immortalità dell'anima nel pensiero di G. Duns Scoto.' [Discusses the question why Duns Scotus was driven to think that no proof of the immortality of the soul is possible.] **Gustavo Bontadini.** 'Realismo e spiritualismo nel pensiero di Giuseppe Tarozzi.' [A discussion of Tarozzi's recent book 'L'esistenza e l'anima'.] **Carlo Mazzantini.** 'La dottrina filosofica di Francesco Bonatelli.' Reviews, etc.

IX.—NOTES.

SECOND INTERNATIONAL HEGEL-CONGRESS.

IN connection with the Centenary of the death of Hegel (November 14, 1831), a Hegel-Congress will be held this year in Berlin from Sunday, October 18, to Wednesday, October 21 (inclusive).

All who wish to attend are requested to give notice of their intention, *as soon as possible*, to Dr. Helfried Hartmann, Berlin, Britz, O.-Bräsigstrasse 34.

A charge of RM. 10 will be made for membership of the Congress ; which, in the case of members of the International Hegel Society, or of students, will be reduced to RM. 5.

JOINT SESSION AT CAMBRIDGE.

THE Symposium on "Indeterminacy and Determinism" will take place, as originally arranged, **at 10 a.m.**, on Saturday **morning** (July 4th).

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